Hazardous Materials

SPECIFICATIONS

VIRGIN ISLANDS GOVERNMENT, OFFICE OF THE GOVERNOR

REHABILITATION OF GOVERNMENT HOUSE, ST. THOMAS

NO. 21 & 22 KONGENS GADE, CHARLOTTE AMALIE,
ST. THOMAS, UNITED STATES VIRGIN ISLANDS 00802

PREPARED BY:

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Mold Remediation Specification

December 2018

Mold Remediation Specification

Specification For:
Government House
Kongens Gade
St. Thomas

TABLE OF CONTENTS

Note: These specification describe procedures to remediate building components contaminated with mold. These specification do not address replacement of those components. Additional specification sections will need to be added to provide details to the contractor performing that work. Also, this specification does not address the measures that will be necessary to correct water and moisture issues at the facility which caused the mold growth. Unless the underlying cause of water or moisture accumulation is corrected, mold growth will continue. This specification does not address repairs to the building envelope or mechanical systems. A general description is provided for final clearance of the mold remediation area. An independent, third-party consultant under the direction of a CIH will be required for final visual inspections and if necessary, sampling.

DIVISION 1 – GENERAL REQUIREMENTS
SECTION 1A – GENERAL REQUIREMENTS

1A.1 **Summary of Work**. The Contractor is required to furnish all labor, materials, services, equipment, tools and insurance to remove and dispose of all microbial contaminated materials described in the scope of work. The project is located at Government House, Kongens Gade, St. Thomas, US Virgin Islands.

1A.2 **Scope of Work**. These specifications, together with other referenced documents, standards and drawings in the contract documents, cover the requirements for all work associated with the mold remediation. The removal method and all related work must be in conformance with U.S. Occupational Safety and Health Administration (OSHA) regulations and all applicable state and local regulatory requirements.

SECTION 1B – SPECIAL REQUIREMENTS

1B.1 **Coordination**. All contracts between the contractor and shall be coordinated through the Resident Engineer (RE) and his/her designated representative.

1B.2 **Pre-Construction Conference**. As soon as practical after the award of the contract, the Contracting Officer will set a date for a pre-construction conference between the representatives of the Government of the US Virgin Islands (ATO, NATCA and PASS will be invited to attend) and the contractor at a location agreed upon by the Contracting Officer and the contractor. The contractor shall attend the conference and shall abide by all agreements reached at the conference regarding:

- Detailed procedures for administration of the project.
- Identity of the RE, authorized representatives of the Government/Contracting Officer, and the contractor's superintendent(s).
- Contractor's telephone number.
- Detailed procedures for submittals.
- Available storage areas for contractor's materials and equipment.
- Compliance with all safety practices, general operating procedures and security regulations.
- Availability of on site power for use by the contractor as determined by the RE.
- The Pre-Construction and Maintenance Project Safety and Health Checklist, form will be reviewed and filled out during the meeting.
- Contractor shall provide copies of all MSDS for any products and restoration materials to be used.
- In addition to the foregoing, other subjects pertinent to the contract may be discussed.

1B.3 **Working Hours.**

1B.4 **Ingress and Egress to Work Area**. The RE shall direct all ingress and egress to the work area. Security precautions against unauthorized facility entrance will be maintained.

1B.5 **Security Requirements**. The facility is a secured facility and access to the interior is restricted to certain personnel only. Therefore, all work included in this contract shall be coordinated to preclude interference with the operation of the facility. The contractor shall coordinate this with the Contracting Officer through the RE. The contractor shall examine the premises and satisfy himself/herself as to the existing conditions under which he/she will be obligated to perform the work included in this contract.

Government House is under security at all times. All critical areas are controlled and security must be maintained. The contractor will provide a list of all personnel, which will be entering the facility to do abatement work, to the Contracting Officer/Contacting Officer's Technical Representative/RE.

The abatement contractor shall maintain a logbook documenting entry into and out of the regulated work area. The contractor shall not allow unauthorized personnel access to the site. Authorized personnel include the contractor and his/her workers, Contracting Officer and his/her representatives, the Environmental Monitoring contractor, representatives of regulatory agencies having jurisdiction over the project, and fire or medical response personnel in the event of emergency. No other person(s) may enter the areas occupied by the contractor or his/her equipment without submitting evidence of completion of required medical examinations , respirator training, and mold abatement training to the COTR/RE prior to entering the abatement areas.

1B.6 **Property Damage**. The contractor shall take all precautions to avoid damage to Government of the US Virgin Islands property or equipment. Any damage to Government of the US Virgin Islands property or equipment by the contractor shall be repaired by the contractor to its original state or better condition at no additional expense to the Government.

1B.7 **Parking of Contractor Vehicles**. All personnel will park their vehicles away from the building and all access doors or as authorized by the RE. Materials and tools may be off-loaded at the work site by arrangements with the RE.

1B.8 **Storage of Materials**. The contractor shall store all materials in a manner to protect them from all elements of the weather. Storage of reasonable quantities of material, supplies and tools on site is permissible providing the RE authorizes the location. The Government of the US Virgin Islands is not responsible for the security of the materials, supplies and tools owned by the contractor.

1B.9 **Site Visit**. The contractor shall take steps necessary to ascertain the nature of the work and satisfy themselves to the conditions that can affect the work. No subsequent extras will be allowed due to any claim of lack of knowledge for conditions that can be determined by examining the site. Site visits can be arranged by contacting the facility manager, at least 24 hours prior to the planned visit.

1B.10 **Compliance with Local Codes and Other Codes**. The contractor shall comply with local and other codes of standard trade practices adopted by these contract documents. Where the requirements of the specifications and drawings exceed those of the local and adapted codes, the contractor shall comply with the requirements of the specifications and drawings.

1B.11 **Fire Protection**. The contractor shall have an equivalent of two 20 lb Class A, B and D fire extinguishers in the work area through the progress of the job.

1B.12 **Cleaning**. The contractor shall keep the working area in a clean and proper condition. All rubbish and waste resulting from the execution of the work shall be removed at the end of each day or as directed by the RE. Immediately after unpacking, all packing materials shall be removed from the building and the premises. Upon completion of work and before final inspection, the contractor shall remove his/her working tools, equipment, debris, rubbish and unused materials from the building site. Disposal of rubbish and debris will be offsite and at no additional cost to the Government of the US Virgin Islands or as directed by the RE.

1B.13 **Non-interference with Existing Facility Operations**. The access to the facility shall be kept unobstructed at all times. If any interference with the existing facility operation or access seems to be unavoidable, the contractor shall advise the contracting officer through the RE 24 hours before such interference. The Government reserves the right to stop work at any time if the operation of this facility is jeopardized by the contractor's work.

1B.14 **Other Contracts**. The Government may undertake other contracts for additional work at or near the site of the work under this contract. The contractor shall fully cooperate with other contractors and with the Government of the US Virgin Islands employees and shall adapt scheduling and performing the work under this contract to accommodate the other work. The contractor shall not commit or permit any act that will interfere with performance of work by any other contractor or by Government of the US Virgin Islands employees.

1B.15 **Contractor's Liability**. Damage to the existing facility or equipment caused by the contractor shall be immediately reported to the RE without delay. The contractor shall be responsible for repairing or having repaired all damaged areas of the facility or equipment directly caused by contractor related work. All repairs shall be accomplished, without delay, at the contractor's expense to the satisfaction of the RE.

1B.16 **Permits.** The contractor shall be responsible for obtaining all city, county, etc. permits, if required, to complete the project, at no additional cost to the Government.

1B.17 **Material**. All equipment, material, and articles incorporated into the work covered by this contract shall be new and of the most suitable grade for the purpose intended, unless otherwise specifically provided in this contract. References in the specifications to material, articles, or patented processes by trade name, make, or catalog number, shall be regarded as establishing a standard of quality and shall not be construed as limiting competition. The contractor may, at his option, use any equipment, material, article or process that, in the judgment of the RE, is equal to that named in the specifications, unless otherwise specifically provided in this contract.

1B.18 **Workmanship**. The contract shall be accomplished by workers experienced in each trade in accordance with the highest standards of the various trades involved. The RE must approve all details to assure the professional and complete project, whether stated in the specifications or not. The RE may require, in writing, that the contractor will remove from the work site any employee the RE deems incompetent, careless or otherwise objectionable.

1B.19 **Superintendence by the Contractor**. At all times during the performance of this contract and until the work is completed and accepted, the contractor shall directly superintend the work on site or assign and have on site a competent superintendent who is satisfactory to the RE and has the authority to act for the contractor.

1B.20 **Warranties**. The contractor shall guarantee that all work performed under this contract to be free from defects in all materials and workmanship for a period of 12 months from the date of final acceptance by the Government of the US Virgin Islands.

1B.21 **Responsibilities**. If within the warranty period, such parts or work performed under this contract is found to be defective in materials or workmanship, that portion of work shall be replaced by the contractor immediately without any additional cost to the Government.

SECTION 1C – SUBMITTALS

1C.1 **Introduction**. Each product required for use in the contract drawings and specifications must meet the actual minimum needs of the Government as demonstrated in the salient characteristics for that product. If a brand name product is used in the drawings or specifications, it should be regarded as a "known acceptable source." The product used can be identical or equal to the brand name product or known acceptable source in meeting the salient characteristics, but it need not exceed the actual minimum requirements. Any brand name product or known acceptable source mentioned will, however, not be required for use in order to comply with the specification or drawing unless those documents make it clear that the brand name product is required, and substitution is prohibited.

1C.2 **Requirements**. Each product that a Contractor wishes to use that is not a known acceptable source must be approved before use, by the Contracting Officer or his/her designee. To gain approval, the Contractor must submit documents and/or samples that will demonstrate the product clearly will meet the Governments minimum needs, and demonstrates appropriate salient characteristics. All submittals must be in writing. The Contracting Officer shall have the right to require submittals from the Contractor where the Contractor makes an unsolicited change proposal.

1C.3 **Submittal Review**. When submitting before the Notice to Proceed date, the Contractor shall send the submittal package directly to the Contracting Officer. When submitting after contract work has begun, the Contractor shall give submittal packages to the RE, who will forward them promptly to the Contracting Officer. In either case, the submittal will return directly from the Contracting Officer to the contractor, with the Contracting Officer's approval, approval with comments, or disapproval.

1C.4 **Submittal Time Frame**. To provide adequate time for document transmission and submittal review, the Government reserves the right to take five days to complete a review, transmission date to transmission date.

1C.5 **Submittals**. The contractor shall submit all of the following:

1. Detailed Work Plan
2. Emergency Response Plan
3. Safety Program
4. Respiratory Protection Program
5. Certificate of training, accreditation, qualification
6. List of Employees
7. Proof of Insurance
8. MSDS for all chemical products
9. Respirator fit test records for employees scheduled for this project
10. Medical surveillance records
11. Negative Air HEPA filtration equipment specification sheets
12. Copies of all notifications to federal, state or local regulatory agencies

13. Detailed schedule of all remediation and restoration activities on a room by room basis.

1C.6 **Work Plan**. The contractor shall prepare a detailed work plan for this mold remediation project. This work plan shall cover all the procedures that the contractor will use to complete the project. This document shall be provided to the Government before the mold remediation work begins and must include a specification of:

1. The rooms or area designation where work will be performed.
2. Configuration of the work area enclosures, decontamination chamber location, HEPA filtered exhaust locations, and equipment cleaning area location.
3. Quantities of materials to be removed or cleaned per each room or area designation.
4. Proposed methods for each type of remediation in each type of area in the project.
5. Listing of equipment proposed for remediation
6. Employee decontamination procedures to be used and locations of decontamination units.
7. Use of chemicals for mold remediation (if authorized).
8. Handling of mold remediation waste materials.
9. Personal protective equipment use.
10. Remediation techniques for each remediation area.
11. Any other standard operating procedures required by law.

SECTION 1D – MOLD ABATEMENT

1D.1 **Contractor Mobilization Requirements**. The contractor shall provide all the services, equipment, supplies, materials, and labor required to remediate, remove, dispose of mold contaminated components and dispose of all waste. The abatement contractor must comply with the following:

1. All work shall be done under the direct supervision of a professional with experience and training in mold remediation.
2. All work shall be conducted by trained individuals following the requirements of Section 1D.3.
3. The contractor shall coordinate and prepare a schedule to be approved by the RE for conducting the remediation at the site.
4. Prior to the scheduled pre-construction meeting, the contractor shall provide copies of all MSDS for any chemicals and other products that have been authorized by the Government that will be brought on site and used during this project.
5. The contractor shall hold a pre-work briefing. The briefing will include a description of work to be done. The contractor will schedule and coordinate the meeting through the facility manager.
6. No chemical cleaners, disinfectants, mold inhibitors, fungicides, encapsulants, spray adhesives, odor masking agents, air fresheners or similar materials are authorized for use during this project unless there is a strong justification to do so and when approved in advance by the Government. Also, when approved by the Government prior to use, small quantities of low odor consumer type hand dishwashing detergent may be used when mixed with water for the purpose of wetting cleaning cloths used for damp wiping surfaces.
7. Equipment and furnishings shall be HEPA vacuumed or damp wiped. If directed by the Government, the cleaned equipment shall be removed to a location designated by the Government of the US Virgin Islands. The surface of all remaining equipment and material in each room shall be HEPA vacuumed or damp wiped, and then covered with 6-mil polyethylene prior to the start of any mold remediation work on each floor.
8. All 6-mil polyethylene sheeting is to be fire retardant.
9. The contractor shall notify the RE immediately if any conditions are identified during the remediation, which may require immediate attention to prevent potential exposure to mold at the facility.

1D.2 **Worker Safety**. Worker protection for all abatement work shall be, at a minimum, half face air purifying respirators equipped with HEPA filters, full body disposable clothing for mold abatement, gloves, boots, and eye protection. Double suiting will be utilized by contractor's employees in areas where a decontamination unit can not be provided directly adjacent to the abatement area. In those cases, the contractor shall provide a means outside the containment where the workers may wash their hands and face prior to leaving the site. Respirators used to provide protection from mold and mold spores must be certified by the National Institute for Occupational Safety and Health (NIOSH). As specified by OSHA in 29 CFR 1910.134, individuals who use respirators must be properly trained, have medical clearance, and be properly fit tested before they begin using a respirator. In addition, use of respirators requires the employer to develop and implement a written respiratory protection program, with work site specific procedures and elements.

1D.3 **Worker Training**. All workers involved in mold-related activities shall be trained to conduct that abatement. Completion of a mold abatement course such as that provided by the Indoor Air Quality Council or equivalent shall be mandatory. Workers shall be familiar with all relevant federal, state and local standards. Workers shall also receive training in Hazard Communication in accordance with CFR 1910.1200.

1D.4 **Work Plan**. The contractor shall prepare a use detailed work plan for this mold remediation project as described in Section 1C.6.

1D.5 **Required Procedures for Remediation and Dust Control**.

1. The contractor shall isolate the HVAC system, stair access door, pipe chase and other floor to floor penetrations. Isolation will be accomplished by the installation of two layers of 6-mil thick polyethylene sheeting. Government of the US Virgin Islands personnel will shut down or redirect the HVAC system or any mechanical air movement systems for these rooms if possible. Proper lockout/tagout procedures shall be followed when shutting down the HVAC system.
2. Place mold remediation warning signs that restrict access to authorized persons at all entrances to the work area.
3. Pre-clean the area that will be house the two-stage decontamination unit and then install the decontamination unit. The decontamination shall have water available for the contractor's employees and authorized visitors to wash their hands and face.
4. A two-stage decontamination unit shall be used for the decontamination of non-porous materials, construction equipment, personnel and safety equipment. The two-stage unit will have a clean room and a dirty room. Personnel and equipment shall enter and exit the work area through the decontamination unit.
5. Designate an equipment cleaning area at a location to permit cleaned equipment to be removed directly from the cleaning area to a designated storage area. The cleaning area should be immediately adjacent to the designated storage area. Isolate the equipment cleaning area and designated storage area with 6-mil polyethylene sheeting. Equipment shall be cleaned using HEPA vacuums and damp wiping techniques. Cover and protect cleaned equipment with 6-mil polyethylene sheeting for the duration of the project.

6. Pre-clean all fixed surfaces in the work area with a HEPA vacuum and damp wiping techniques.
7. Erect enclosures around the immediate area where mold contaminated components will be removed to prevent the release of dust to the remaining work area.
8. Place removed materials in 6-mil polyethylene bags or wrap in two layers of 6-mil polyethylene sheeting.
9. Clean all surfaces within the remediation area with a HEPA filtered vacuum and damp wiping.
10. If this project dictates the establishment of a full containment system. Establish negative pressure within the erected work areas through the use of HEPA filtered exhaust units that discharge outside the enclosure, preferably to the outside of the building. Negative pressure within the erected enclosure work area is to be maintained with a minimum of 0.02 inches of water column differential relative to the work area outside of the enclosure.

1D.6 **Removal of Mold Contaminated Drywall**. Remove drywall to the extent indicated on the drawings. Drywall shall be cut away through the use of spiral cutting saw equipped with a close capture exhaust system attached to a HEPA filtered vacuum for dust control. The cutting depth of the spiral saw will be adjusted to a depth slightly less than the thickness of the drywall. Final cutting of the scored drywall will be made with a razor knife to avoid release of dust into the wall cavity and to prevent damage to concealed equipment, or additional layers of wall board that are present. In areas where access restrictions prevent use of spiral saws, hand saws may be used, but only while a HEPA vacuum is used to capture dust at the point of generation. Reciprocating saws shall not be used. If a second layer of drywall is encountered, notify the Government RE. If, upon inspection by the Government's RE, visual evidence of mold growth on the remaining previously concealed layer is discovered, then the second layer will be removed. If the second layer is removed, the amount of the second layer will not exceed the area of the first section as indicated on the drawings, unless authorized by the RE.

1D.7 **Ceiling Tile Removal.** The following procedures shall be used for removal of mold contaminated suspended ceiling tiles:

1. Cover the floor and any equipment or furniture under the ceiling tile(s) to be removed with 6 mil polyethylene sheeting.
2. Vacuum lower surface of the tile to be removed with a HEPA filtered vacuum.
3. Carefully remove the ceiling tile and place it directly into a 6-mil plastic bag and seal.
4. Clean the exposed grid with a HEPA filtered vacuum.
5. HEPA vacuum the floor to remove any visible debris.
6. Remove the 6 mil floor covering.

1D.8 **HVAC System Decontamination.** The following procedures shall be used for the decontamination of mold inside HVAC systems:

1. The HVAC system shall be shut down prior to work.
2. The work area shall be completely isolated from other areas of the HVAC system using 6 mil polyethylene sheeting and duct tape. The access areas for the duct work shall be enclosed in a negative pressure enclosure.
3. A two-stage decontamination system shall be used.
4. Remove all mold contaminated materials including interior insulation of interior lined ducts and filters.
5. If contaminated interior insulation can not be adequately removed, or if the interior sections can not be adequately cleaned, those HVAC system components are to be removed in entirety.
6. HEPA vacuum all interior and exterior surfaces of the HVAC system in the work area.
7. Clean all surfaces with a damp cloth and/or mop and a detergent solution. A biocide may be used in certain areas of the HVAC system, such as cooling coils and condensate pans. The type used will depend on recommendations from the HVAC manufacturer. The contractor shall provide information on any biocides proposed to be used to the RE prior to initiation of work.
8. Allow all areas to thoroughly dry.
9. All areas shall be left dry and visibly free of mold contamination and debris.

ID.9 **Plumbing Components.** Mold has been identified on the insulating materials (fiberglass) of various piping systems associated with the air handling units (AHU) and may also be present on the bare pipe. The contractor shall follow the procedures as described in Section 1D.5 to isolate and demarcate the area. The contractor shall carefully remove the pipe insulation with wet techniques to minimize dust generation and containerize in 6 mil thick plastic bags. The bare pipe shall be wiped down with an appropriate fungicide. The pipe system shall be inspected for leaks by Government of the US Virgin Islands or their representative prior to re-insulation activities. Replacement insulation will be a flexible elastomeric insulation such as Armaflex approved by the RE.

1. D.10 **Concrete Block Wall Decontamination.**

1. HEPA vacuum the wall surface to remove loose surface mold.
2. Scrub off any remaining visible contamination with a stiff brush while keeping the area wet using a detergent or bleach solution.
3. After the area dries, HEPA vacuum the surface again.
4. Wipe the surface with a damp sponge containing a detergent or bleach solution.
5. Let the area thoroughly dry.

1D.11 **Wooden Building Components.** Mold has been identified on wooden building components. The contractor shall follow the procedures as described in Section 1D.5 to isolate and demarcate the area. The affected wooden building components shall be replaced, if structurally feasible, or cleaned and treated with an approved fungicide. If the components are to

be removed, replacement components will be approved by the RE. If the components are to be cleaned and treated, the contractor will clean, disinfect, and apply a suitable surface coating. Any areas of visible mold shall be manually removed and appropriate repairs made prior to the application of an anti-microbial surface coating. The RE shall approve the contractor's work plan and all cleaning, disinfection, and coating products prior to the start of the remediation.

1D.12 **Waste Disposal.** The mold contaminated waste is to be double sealed or bagged in labeled 6 mil polyethylene sheeting or bags. Each bag shall be adequately sealed. The seams of the sheeting shall be sealed with duct tape. The outside of the bags or sheeting shall be visibly clean before transporting to the outside of the abatement areas. Finally, the bags shall be transported to the remediation contractors vehicle and then disposed of in an approved landfill. The contractor is responsible for proper packaging, temporary storage, transport, and disposal of all waste generated as the result of this project.

1D.13 **Remediation Area Completion.** The work area must be free of visible mold, mold damaged materials, and accumulation of dust as determined by visual examination. The inspection will be performed by a third party Certified Industrial Hygienist (CIH) hired by the Government of the US Virgin Islands. The CIH will determine the need for post-remediation air sampling. If sampling is performed, the following verification criteria will be utilized:

1. Sampling will be performed only after the remediation area has passed a thorough visual inspection and before the containment barriers are removed.
2. All air sampling pumps will be calibrated before and after use.
3. Airborne concentrations of mold spores within the work area must not exceed outdoor concentrations. The mean of at least 3 samples collected from each work area will be compared to the mean of 3 samples collected from outside the building. The genera of mold spores within the work area must be similar to those found outside.

1D.14 **Restoration.** [Include details on restoration work to be performed by the contractor. This may include installation of replacement materials (such as gypsum board, insulation, vinyl-base, etc.) painting, additional cleaning, etc. Pay particular attention to items that are unique to Government of the US Virgin Islands facilities and operations.

LEAD BASE PAINT REPORT

Specification for:

Government House

Kongens Gade, St. Thomas VI.

1 GENERAL

1.1 STATEMENT OF WORK

The work to be performed includes the following general outline of principal features: however, it does not in any way limit the responsibility of the Contractor to perform all work and furnish all labor and materials required by these specifications.

Location of this work:

Government House
21-22 Kongens Gade, Charlotte Amalie
St. Thomas USVI 00802

This work scope will consist of the following lead based paint abatement:

- ***On the third floor – All doors and door frames in the colors white and /or pink up to 20 door and door frames***

- ***On the 2nd floor – All Kitchen walls – up to 400 sq/ft***

The work covered by primary scope for this project involves the abatement of lead based paint and describes procedures and equipment required to protect workers and occupants of the work area from contact with airborne fibers/dust and debris. The above mentioned work also includes the appropriate disposal of generated wastes. More specific operational procedures shall be outlined in the required hazard abatement plans called for elsewhere in these specifications. The contractor's responsibilities under these specifications are to furnish all labor, material, services, training and equipment needed to complete the project.

The Contractor shall visit the premises to become thoroughly familiar with details of the work and working conditions, verify dimensions in the field and shall advice the Owner of any discrepancy before starting the work.

1.2 PRE-ABATEMENT CONFERENCE

Prior to starting onsite construction the Contractor is required to attend a pre-abatement conference with the Owner or its representatives. During this meeting, the Contractor shall submit for approval his Abatement Plans, Respiratory Protection Plan, Quality Control Plan and Accident Prevention Plan for review and the development of a mutual understanding relative to details of these specifications, tests and administration. No change in the approved Abatement Plans, Construction Schedule, Quality Control Plan, Respiratory Protection Plan and Accident Prevention Plan shall be implemented without written concurrence by the Owner or its representative. No work shall begin until the Plans, Construction Schedule, Quality Control Plan and Accident Prevention Plan are approved.

The Contractor shall coordinate any required utility connections directly with the Owner or his Representative. The Owner will maintain exclusive access to all utility valves and switches at all times.

1.3 APPROVALS

The approval of the submittals by the Owner shall not be construed as a complete check, but will indicate only that the general method of construction and detailing is satisfactory. Approval will not relieve the Contractor of the responsibility for any error which may exist, under the CQC requirements of this contract, as the Contractor is responsible for the dimensions and design of adequate connections, details and satisfactory construction work at all times.
When the submittals are not approved, the Contractor shall make all corrections required by the Owner and promptly furnish three copies of the corrected submittal in the form specified.

1.4 CERTIFICATE OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials and procedures with the specifications requirements shall be executed in three copies. Each certificate shall be signed by the Contractor and include the name and location of the project.

Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the date or dates of the tests to which the report applies.

Certification shall not be construed as relieving the Contractor from furnishing satisfactory material, in case materials are found not to meet the specific requirements.

1.5 CONTRACTOR QUALITY CONTROL (CQC)

The quality of all work shall be the responsibility of the Contractor. Sufficient inspections and tests of all items of work to ensure conformance with the applicable specifications shall be performed on a continuing basis. The Contractor shall furnish qualified personnel, appropriate equipment, instruments and testing devices necessary for the performance of the quality control function. The controls shall be adequate to cover all operations necessary to fulfill all work in these specifications. The Contractor's proposed written quality control plan shall include as a minimum:

a. The quality control organization
b. Statement of qualifications
c. Names and qualifications of supervisory personnel
d. Schedule of inspections by type and phase of work
e. Proposed test methods and names of qualified testing laboratory to be used
f. Method of performing, documenting and enforcing quality control operations
g. Name of the person in charge of the quality control program

1.5.1 Preparatory Inspection

Preparatory inspections shall be performed by the Air Monitoring Specialist prior to the beginning of each feature of work on any abatement. Preparatory inspections for the applicable feature of work shall include at a minimum:

- review of submittal requirements and other contract requirements
- check to assure that provisions have been made to provide required field control testing
- examine the work area to ascertain that all preliminary work has been completed
- verify all dimensions and advise the Owner of any discrepancies
- perform a physical examination of equipment and materials to assure that they conform to the specifications and that all equipment and/or materials are on hand

1.5.2 Initial Inspection

Initial Inspection shall be performed by the Air Monitoring Specialist as soon as work begins on a representative portion of the particular feature of work and shall include examination of the quality of workmanship as well as review of control testing for compliance with contract requirements.

1.5.3 Follow-up Inspection

Follow-up inspections shall be performed continuously as any particular feature of work progresses, to assure compliance with contract requirements, including control testing, until completion of that feature of work.

1.5.4 Safety Inspections

The Contractor shall perform daily safety inspections of the job site and the work in progress to assure compliance with the Occupational Health and Safety requirements of this contract. Daily Quality Control reports shall be used to document the inspection and shall include a notation of the safety deficiencies observed and the corrective action taken. The Contractor shall use his designated person to perform these required inspections.

1.6 TESTING LABORATORY AND EQUIPMENT

The Contractor shall provide an approved independent commercial laboratory or laboratories to perform all sampling and testing as specified. All measuring and testing devices, laboratory equipment, instruments, transportation and supplies necessary to accomplish the required testing and inspection shall be provided. All measuring and testing devices shall be calibrated at established intervals against certified standards. The testing laboratory shall be experienced in the type of testing work to be done. A representative of the testing laboratory shall be at the work site as necessary for sampling, inspecting and testing required to control the quality of the work. Upon request, certain measuring and testing devices shall be made available for the use by the Owner for verification tests.

1.7 ENFORCEMENT

The Contractor shall stop work on any item or feature, pending satisfactory correction of any deficiency noted by his quality control person or by the Owner or his Representative. Construction shall not proceed on any new feature work unless all unsatisfactory work is corrected.

1.8 REFERENCES

The publications listed below form a part of this specification to the extent reference. The publications are referred to in the text by basic designation only.

1.8.1 CODE OF FEDERAL REGULATIONS (CFR)

24 CFR Part 35.50 35.56	Elimination of Lead-Based Paint Hazards in Federally-Owned Properties Prior to sale for Residential Habitation
29 CFR Part 1910	Occupational Safety and Health Standards - **OSHA**
29 CFR Part 1926	Safety and Health Regulations for Construction
36 CFR Part 60	National Register of Historic Places
36 CFR Part 800	Protection of Historic and Cultural Properties
40 CFR Part 148	Hazardous Waste Injection Restrictions
40 CFR Part 260	Hazardous Waste Management System: General
40 CFR Part 261	Identification and Listing of Hazardous Waste
40 CFR Part 262	Standards Applicable to Generators of Hazardous Waste
40 CFR Part 263	Standards Applicable to Transporters of Hazardous Waste

40 CFR Part 264	Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities
40 CFR Part 265	Interim Status Standards for Owners and Operators of Hazardous Waste Treatment, Storage and Disposal Facilities
40 CFR Part 268	Land Disposal Restrictions
49 CFR Part 172	Hazardous Material Table, Special Provisions, Hazardous Material Communications, Emergency Response Information and Training Requirements
49 CFR Part 178	Specifications for Packaging

1.8.2 DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT (HUD)

HUD ACCN-5646	Lead-Based Paint: Interim Guidelines for Hazard (Sept. 1990; Revised May 91) Identification and Abatement in Public and Indian Housing

1.8.3 ENGINEERING MANUALS (EM)

EM 385-1-1 (1992)	US Army Corps of Engineers Safety and Health Requirements Manual

1.8.4 NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA (1989)	Methods of Fire Test for Flame Resistant Textiles and Films

1.8.5 NATIONAL. INSTITUTE FOR OCCUPATIONAL SAFETY AND HEALTH

NIOSH OSHA Booklet 3142	Lead in Construction

1.8.6 UNDERWRITERS LABORATORIES INC. (UL)

UL 586	(Oct. 18, 1990; 7th Edition) HEPA High-Efficiency, Particulate, Air Filter Units

1.8.7 US DEPARTMENT OF THE INTERIOR- NATIONAL PARK SERVICE

Standards for the Treatment of Historic Properties;
Secretary of the Interior' s Standards and Guidelines (1972, 1992)

2 ENVIRONMENT PROTECTION

The Contractor shall perform all work in such manner as to minimize the polluting of air, water, or land, and shall, within reasonable limits, control noise and disposal of solid waste materials, as well as other pollutants.

2.1 ROTECTION OF WATER RESOURCES

The Contractor shall control the disposal of fuels, oils, bitumen, calcium chloride, acids or harmful materials, both on and off the Owner's premises and shall comply with all applicable Federal, State and local or territorial laws concerning pollution of rivers and streams while performing work under this contract. Special measures shall be taken to prevent chemicals, fuels, oils, greases, bituminous materials, herbicides and insecticides from entering public waters. Water used in onsite work shall not be allowed to reenter a stream if an increase in the turgidity of the stream could result therefrom.

2.2 GENERAL WASTE DISPOSAL

No waste material shall be dumped in other than authorized areas. If any waste material is dumped in unauthorized areas, the Contractor shall remove the material and restore the area to the condition of the adjacent undisturbed area. Where directed, contaminated ground shall be excavated, disposed of as approved and replaced with clean suitable fill materials, all at the expense of the Contractor. **No waste materials shall be disposed of (including burning) on the Owner's property, dispose of all waste in an approved land fill or location.** In accordance with all Federal, State and local/territorial regulations pertaining to storage, transport and disposal of such products.

The Contractor shall clean up his working area(s) daily. Upon completion of all work, the entire areas of contract work shall be cleaned of excess materials, rubbish and debris.

3 SECURITY

Fenced and locked security area shall be provided for each lead abatement regulated work area. A log book shall be kept documenting entry into and out of the lead abatement regulated work area. Entry into regulated work areas shall only be by personnel authorized by the Contractor and Architect. Personnel authorized to enter regulated work areas shall be trained, medically evaluated and wear the personal protective equipment, as required by this specification, for the specific lead abatement regulated work area to be entered.

3.1 VISITORS

Except for government inspectors having jurisdiction, no visitors shall be allowed in the work area, except as authorized by the Owner. The Contractor shall provide authorized visitors with suitable respirators as specified in this paragraph.

4 MEDICAL REQUIREMENTS

Medical requirements shall conform to CFR 29 Part 1926.

4.1 MEDICAL EXAMINATIONS

Before being exposed to lead, workers shall be provided with a comprehensive medical examination as by CFR 29 Part 1926 and other pertinent state or local requirements. This requirement must have been satisfied within the past year. The same medical examination shall be given on an annual basis to employees engaged in an occupation involving respiratory protection and within 30 calendar days before or after the termination of employment in such occupation. X-ray films of lead abatement workers shall be identified to the consulting radiologist.

4.2 MEDICAL AND EXPOSURE RECORDS

Complete and accurate records shall be maintained of each employee's medical examinations, medical records and exposure data as required by CFR 29 Part 1910, Section 1910.20 and CFR 29 Part 1926. Records of the required medical examinations and exposure data shall be made available for inspection and copying to: The Assistant Secretary of Labor for Occupational Safety and Health (OSHA) or authorized representatives of the employee and an employee' s physician upon request of the employee or former employee. Maintain on file at the work site for review as requested by the Owner, a copy of the required medical certification for each employee.

5 TRAINING

Prior to assignment and commencement of work on this lead abatement project, each worker directly involved in handling lead, lead generated wastes to include packaging and transporting such wastes for disposal, shall take and successfully complete a course of lead training as specified in Federal Register Vol 55, No 75 Part 5.8.2. Workers shall take and successfully complete the "Worker" course. On-site supervisors and technical support personnel shall take and successfully complete the "Contractor Supervisor" course. In addition, prior to the commencement of work, each worker shall be instructed by the Contractor's on site "competent person" supervisor in the following project specific training:

- the hazards and health effects of lead,
- the content and requirements of the Contractor's Hazard Abatement Plan,
- Accident Prevention Plan,
- Hazard Communication Program,
- site-specific safety and health precautions,
- work practices,
- the use requirements and limitations of the personal protective clothing, equipment, and respirators to be used,
- hand-on-training for each abatement technique to be employed,
- heat and/or cold stress monitoring specific to this project,
- personal hygiene and housekeeping requirements,
- air monitoring program and procedures,
- medical surveillance to include medical and exposure record keeping procedures,
- emergency evacuation procedures in the event of compressor failure
- security procedures,
- emergency response requirements

Training shall also include, for each employee, a respirator fit test administered by the Contractor's Competent Person as required by CFR 29 Part 1926, Section 1926. 58.

CERTIFICATE OF WORKER'S ACKNOWLEDGMENT

PROJECT NAME : _____

PROJECT ADDRESS : _____

CONTRACTOR'S NAME : _____

EMPLOYEE'S NAME : _____

WORKING WITH LEAD CAN BE DANGEROUS

Your employer's contract for the above project requires that: you be provided with and complete and project specific training, you be supplied with proper personal protective equipment formaling respirators, that you be trained in its use and that you receive a medical examination to evaluate your physical capacity to perform your assigned work tasks, under the environmental conditions expected, while wearing the required personal protective equipment. These things are to be done at no cost to you. By signing this certification, you are acknowledging that your employer has met these obligations to you.

TRAINING: I have completed a training course for: lead abatement workers (for workers) (Contractor Supervisor) that meets this state's requirements.

PROJECT SPECIFIC TRAINING: I have been provided and have completed the project specific training required by this Contract. My employer' s competent person supervisor conducted the training.

RESPIRATORY PROTECTION. I have been trained in accordance with the criteria in the Contractor's Respiratory Protection program. I have been trained in the dangers of handling and breathing lead dust and in the proper work procedures and use and limitations of the respirator(s). I will wear. I have been trained in and will abide by the facial hair policy of my employer.

RESPIRATOR FIT-TEST TRAINING: I have been trained in the proper selection, fit, use, care, and maintenance, and storage of the respirator(s) that I will wear. I have been fit-tested in cleaning, with the criteria in the Contractors' s Respiratory Program and have received a satisfactory accordance I have been assigned my individual respirator. I have been taught how to properly perform and negative pressure fit-check upon donning negative pressure respirators each time.

MEDICAL EXAMINATION. I have had a medical examination within the last twelve months which was paid for by my employer. The examination included: health history, pulmonary function tests, and may have include an evaluation of a chest x-ray. A physician made determination regarding my physical capacity to perform work tasks on the project while wearing personal protective equipment including a respirator. I was personally provided a copy and informed of the results of that examination. My employer evaluated the medical certification provided by the physician and the physician determined that there were no limitations to performing the required work tasks; and that there were no identified physical limitations to performing the require work tasks.

Employee Signature: _____

Date: _____

Social Security Number: _____

5.1 RESPIRATORY PROTECTION PROGRAM

The Contractor shall establish in writing, and implement a respiratory protection program in accordance with CFR 29 Part 1926 based on measured or anticipated levels of airborne lead concentrations encountered during the performance of the abatement work. The Contractor's respiratory protection program shall include, but not be limited to, the following elements:

1. The company policy, used for the assignment of individual responsibility, accountability, and implementation of the respiratory protection program.

2. The standard operating procedures covering the selection and use of respirators. Respiratory selec tion shall be determined by the hazard to which the worker is exposed.

3. Medical evaluation of each user to verify that the worker may be assigned to an activity where respiratory protection is required.

4. Training in the proper use and limitations of respirators.

5. Respirator fit-testing, i.e., quantitative, qualitative and individual functional fit checks.

6. Regular cleaning and disinfection of respirators.

7. Routine inspection of respirators during cleaning and after each use when designated for emerg ency use.

8. Storage of respirators in convenient, clean, and sanitary locations.

9. Surveillance of work area conditions and degree of employee exposure (e.g., through air monitori ing).

10. Regular evaluation of the continued effectiveness of the respiratory protection program.

11. Recognition and procedures for the resolution of special problems as they affect respirator use (e.g., no facial hair that comes between the respirator face piece and face or interferes with valve function; prescription eye wear usage; prohibition of wearing contact lenses; etc.).

12. Proper training in putting on and removing respirators.

MINIMUM PERSONNEL PROTECTION REQUIREMENTS α

Activity	Respiratory Protection	Disposable Clothing	Shower Required	DECON Required
Removal of "loose items" prior to work, no exposure	None	No	No	No
Removal of "loose items" prior to work, potential exposure	HMHER	Yes	No	No
Precleaning prior to abatement	HMHER	Yes	No	No
Sealing openings prior to abatement, no potential exposure	None	No	No	No
Plasticizing prior to abatement, no potential exposure	None	No	No	No
Plasticizing prior to abatement, potential exposure	PAPR	Yes	No	No
Gross Abatement	PAPR	Yes	Yes	Yes
Wrap and cut removal	PAPR	Yes	No	Yes *
Glovebag removal	PAPR	Yes	No	Yes *
Lead containing debris removal	PAPR	Yes	No	Yes *
Lead Contaminated Soil	PAPR	Yes	No	Yes
Preliminary cleanup (after removal)	PAPR	Yes	Yes	Yes
Plastic removal after initial clearance	HMHER	Yes	No	No
Lockdown	PAPR	Yes	No	No
Cleaning and plastic removal after lockdown	HMHER	Yes	No	No
Activities after final clearance	None	No	No	No
Loading lead waste on truck (outside the work area)	HMHER	Yes	No	No

Note:

α These are minimum requirements only. The Contractor is fully responsible for the personnel protection of all personnel at the site. Where conflict or interpretational differences arise, the text of the specifications apply.

* On-site for emergency use. .

PAPR Powered Air Purifying Respirator with HEPA filters
HMHER Half mask high efficiency respirator with HEPA filters

5.2 HAZARD COMMUNICATION PROGRAM

A hazard communication program shall be established and implemented in accordance with CFR 29 Part 1926, Section 1926.59.

6 SUBMITTALS

Approval (AP) is required for submittals with a "AP" designation. Because certain buildings are possible within the National Historic Landmark, abatement methods described in the Lead-Based Paint Management Plan some of these buildings will need to be approved by the State Historic Preservation Officer (SHPO), for compliance with 36 CFR Part 60, 36 CFR Part 800, and the Programmatic Agreement under 36 CFR Part 800 Section .13. The Owner will be responsible for obtaining this approval. The following shall be submitted prior to start of any lead-based paint (LBP) abatement work. Work shall not begin until those submittals having a "AP" designation have been approved by the Owner.

6.1 DATA

6.1.1 EQUIPMENT LIST (AP)

The Owner requests an equipment list for items to be used in the work, including brand name, model, capacity, performance characteristics, quantities and other pertinent information.

6.1.2 STATEMENTS

Lead-Based Paint (LBP) Inventory. (AP)

A space-by-space inspection shall be conducted with the Owner or his Representative. A written inventory shall be prepared that identifies the defective LBP surface. The Authorizing Agency's previous inventory will be used as a basis for the inspection. Defective areas and materials identified as containing LBP shall be treated unless the Contractor provide analytical evidence stating that the materials are not contaminated with LBP. If the inventory identifies additional defective LBP' the Contractor shall make an amendment to the inventory.

6.1.2.1 Lead-Based Paint (LBP) Management Plan (AP)

The Contractor shall prepare a detailed LBP Management Plan that identifies the work procedure, health, and safety measure to be used in LBP abatement. The plan shall address the various source of lead and the methods to be undertaken to abate the lead hazards to include the following key elements:

a. Location of all defective LBP surfaces.
b. Abatement methods for each defective LBP surface.
c. Means for notifying occupants of proposed work schedule.
d. Training requirements as required by federal, and territorial regulations.
e. Unique problems associated with the LBP abatement project.
f. Sketch of LBP control areas and decontamination areas.
g. Eating, drinking, smoking, and rest room procedures.
h. Sequencing of LBP related work.
i. Personnel protective equipment; respiratory protection program and controls.
j. Engineering controls, containment structure, and safety measures.

k. Worker exposure assessment procedures.
l. Work Practice controls.
m. Housekeeping.
n. Hygiene facilities and practices.
o. Medical Surveillance, including medical removal protection.
p. Sampling, testing and analytical methods to include personal air sampling requirements of 29 CFR Part 1926 Section 62 and when specified or where required, environmental air sampling, dust wipe sampling and soil sampling (pre-abatement, during abatement, post abatement), toxicity characteristic leaching procedure (TCLP) of the waste material in accordance with 40 CFR Part 261. Procedures must include frequency, locations, and sampling and analytical methods to be used.

6.1.2.2 Emergency Contingency Plan (AP)

An emergency contingency plan shall be prepared in accordance with 40 CFR Part 26. Procedures must address the following LBP abatement hazards as appropriate to the project:

a. Negative air pressure system failure.
b. Major breech of containment barriers.
c. Detection of unexpected lead levels on adjacent grounds.
d. Spilling of lead debris bags or containers.
e. Phone numbers for project manager, local fire, police and medical personnel.

6.1.2.3 Hazardous Waste Management Plan (AP)

A Hazardous Waste Management Plan shall be prepare that complies with applicable requirements of Federal, state, and local hazardous waste regulations and addresses:

a. Identification or documentation of potential hazardous wastes associate with the work.

b. Estimated quantities of wastes to be generate and to be disposed off.

c. Names and qualifications of each contractor that will be transporting, storing, treating, and disposing of the wastes; the facility location, phone number, and name of a 24 hour point of contact shall be included. Furnish two copies of EPA, state, and local hazardous waste permit applications, permits, and EPA identification numbers.

d. Names and qualifications (experience and training) of personnel who will be working onsite with hazardous waste.

e. List of waste handling equipment to be used in performing the work to include cleaning, volume reduction, and transport equipment.

f. Spill prevention, containment, and clean-up contingency measures to be implemented.

g. Work plan and schedule for waste containment, removal, and disposal. Waste shall be cleaned up and containerized daily.

h. Cost for hazardous waste disposal according to this preliminary plan.

6.1.2.4 Waste Handling and Site Storage Plan (AP)

A Waste Handling and Site Storage Plan shall be prepared that addresses the handling and storage of LBP debris in accordance with the requirement of 40 CFR Part 262 and 40 CFR Part 265. The Contractor shall confirm that an EPA identification number has been obtained so that proper manifesting of the waste will be addressed, and that site storage limitations, including the time of storage, container requirements, contingency plan, and personnel training have been complied with.

6.1.2.5 Waste Disposal Plan (AP)

A Waste Disposal Plan shall be prepared that will include but not be limited to the following:

a. A written confirmation that the debris will be treated and disposed of in accordance with the requirements of 40 CFR Part 260, 40 CFR Part 261, 40 CFR Part 262, 40 CFR Part 264, and 40 CFR Part 268.

b. A written confirmation that transportation of the debris will be in accordance with 40 CFR Part 263.

c. Waste subcontractor's name, address, telephone number, and landfill location, including copies of licenses and signed agreements.

d. Landfill name, address, and telephone number. A copy of the landfill's state and issued license, and a signed agreement that the landfill will accept the LBP wastes .

e. Detailed delivery tickets prepared, signed, and dated by an agent of the landfill, certifying the amount of LBP containing materials delivered to the landfill, within 15 days after delivery.

6.1.3 REPORTS

6.1.3.1 Sampling Results (AP)

A daily log of the air sampling test results shall be reviewed by the Competent Person and submitted, in written form, no more than 48 hours after completion of the sampling cycle. The log shall list each sample result, sampling time and date, sample type, identification of personnel monitored, flow rate and duration, air volume sampled, yield of lead, cassette size, analytical method used, analyst' s name and company, and interpretation of results. Results shall be reported in micrograms of lead per cubic meter of air. In addition, the daily log shall include the results of dust wipe samples, and TCLP sampling including each phase of preabatement, during abatement and final clearance. Documentation of results that exceed specified limits personal air samples that exceed 30 micrograms per cubic meter) or as required by Federal or territorial requirements shall be highlighted in the log in such a manner to make them easily distinguishable from monitoring results that do not exceed specified or regulatory limits.

6.1.4 CERTIFICATES

6.1.4.1 Licenses & Permits

The Contractor is required to supply to the Owner before commencement of work:

- Local Hazardous Waste (or equivalent) Contractors License
- Lead Based Paint Abatement Supervisor License
- Licenses of all Personnel
- Medicals of all Personnel
- Respiratory Protection Program including all Personnel

6.1.4.2 Radiological Equipment

The Contractor is required to obtain a service permit, in accordance with Federal, State and local / territorial laws, to use, store, operate or handle a radiation-producing machine or radioactive materials such as an XRF Lead Based Paint Analyzer. The Contractor should notify the Owner or his Representative during the pre work conference if a radiation-producing device will be utilized in order to determine the permit application requirements.

6.1.4.3 Material Safety Data Sheets (MSDS)

Contractor will submit all MSDS sheets, obtained from the manufacturer or dealer, concerning all hazardous material they will be using, within three days prior to the use of the hazardous material. This includes items as spray-glue, encapsulants etc.

6.1.4.4 Quality Assurance

Quality Assurance (AP) Certificates shall meet the requirements of the Section, *Quality Assurance*. The statements shall be signed and dated by a certifying officer after the award of this contract and contain the following:

a. Contractor's name and address.

b. Project name and location.

c. The specified requirements that are being certified.

7 QUALITY ASSURANCE

7.1 QUALIFICATIONS

a. **Contractor:**
Certification that the Contractor has prior experience on LBP abatement projects similar in nature and extent to ensure the capability to perform the abatement in a satisfactory manner.

b. **Competent Person:**
Certification that the Contractor' s full-time onsite Competent Person meets the competent person requirements of 29 CFR Part 1926 Section 62 and is experienced in administration and supervision of LBP abatement projects, including work practices, protective measures for building and personnel, disposal procedures, etc. This person shall have completed a Contractor Supervisor LBP abatement course by an EPA Training Center or equivalent certification course, and have had a minimum of one year on-the-job experience. If the Competent Person will be responsible for health and safety functions, such as collecting air samples for lead and monitoring lead hazards, they should be qualified by training or experience and shall be familiar with sampling techniques, sampling equipment, calibration procedures and work practices useful for controlling air contamination.

c. **Certified Air Monitoring Specialist(AMS):**
Certification that the AMS has at least one year prior experience on similar LBP abatement projects and is certified to perform air monitoring. The certification shall include a copy of the certificate showing certification number and date of certification or rectification.

d. **Testing Laboratory**:
The name, address, and telephone number of the independent testing laboratory(s) selected. Documentation that the laboratory(s) performing the analysis is an EPA National Lead Laboratory Accreditation Program (NLLAP) accredited laboratory and that it is rated proficient in the NIOSH/EPA Environmental Lead Proficiency Analytical Testing Program (ELPAT). Certification shall include accreditation for heavy metal analysis, list of experience relevant to analysis of lead in air, and a Quality Assurance and Quality Control Program. Currently, the American Association for Laboratory Accreditation (ASLA) and the American Industrial Hygiene Association (AIHA) are the EPA recognized laboratory accreditors. Documentation shall include the date of accreditation or reaccreditation.

e. **Blood Lead Testing Laboratory**:
The name, address and telephone number of the blood lead testing laboratory; the laboratory's listing by OSHA and the US Public Health Service Center for Disease Control (CDC); and documentation that the laboratory is certified in the state or territory where the work site is located.

7.2 RESPIRATORY PROTECTION DEVICES

Manufacturer's certification of NIOSH or the Mine Safety and Health Administration (MSHA) approval for respiratory protection devices utilized on the site.

7.3 CARTRIDGES - FILTERS AND VACUUM SYSTEMS

Manufacturer's certification of NIOSH approval of respirator cartridges (organic vapor, acid gas, mist, dust, high efficiency particulate); High Efficiency Particulate Air (HEPA) filtration capabilities for all cartridges, filters, and HEPA vacuum systems.

7.4 MEDICAL RECORDS

Certification that employees who are involved in LBP abatement work have received medical examinations and will receive continued medical surveillance, including biological monitoring, as required by 29 CFR Part 1926 Section 62 and by the local and territorial regulations pertaining to such work. Records shall be retained, at Contractor's expense, in accordance with 29 CFR Part 1910 Section 20.

7.5 TRAINING

Training certification shall be provided prior to the start of work involving LBP abatement, for all of the Contractor's workers, supervisors and Competent Persons. Training shall meet the requirements of 29 CFR Part 1926 Section 62, 29 CFR Part 1926 Section 59, and 49 CFR Part 172, and that required by EPA or the state/territory LBP course for the work to be performed. Training shall be provided prior to the time of job assignment and, at least, annually. Training may cover all abatement methods or focus only on those methods specified in the LBP Management Plan. The project specific training shall, as a minimum, include the following:

a. Specific nature of the operation which could result in exposure to lead.

b. Purpose, proper selection, fitting, use and limitations of respirators.

c. Purpose and description of the medical surveillance program, and the medical removal protection program, including information concerning the adverse health effects associated with excessive exposure to lead (with particular attention to the adverse reproductive effects on both males and females and hazards to the fetus and additional precautions for employees who are pregnant).

d. Relevant engineering controls and good work practices.

e. The contents of any compliance plan in effect.

f. Instructions to employees that chelating agents should not routinely be used to remove lead from their bodies and should not be used at all except under the direction of a licensed physician.

g. The employee's right to records under 29 CFR Part 1910 Section 20.

7.6 LICENSES AND PERMITS

Copies of licenses and permits as required by applicable Federal, state, and territorial regulations shall be obtained at least 30 days before the start of the LBP abatement project.

8 DESCRIPTION OF WORK

Hazards associate with defective (peeling, cracking, scaling, chalking, chipping, or loose) surfaces of lead-based paint are required to be eliminated in accordance with the Lead-Based Paint Poisoning Prevention Act as cited by 24 CFR Part 35 Section 56. These surfaces include both interior and exterior painted surfaces. It is assumed that all paint associated with the targeted buildings containing lead, based on sampling results, the age of the buildings and the pervasive use of lead-base paint prior to 1960. The hazards associated with the defective LBP will be eliminated by the contractor by a combination of enclosure/encapsulation, physical/chemical treatment, and removal techniques. Structures that are designated Historical Landmark, so proposed methods should minimize any adverse effects to the historic character of the buildings, in accordance with 36 CFR Part 60, 36 CFR Part 800, and the Programmatic Agreement.

The Contractor shall furnish all labor, materials, services, training, insurance, and equipment as needed to complete the abatement work for the structures described. The Contractor shall follow all Federal, state and territorial ordinances, regulations and rules pertaining to lead, including its storage, transportation and disposal.

8.1 SITE VISIT

Contractor shall visit and investigate the site; review the drawings and specifications; assess the amount of defective LBP; and become familiar with conditions which will affect the work.

8.2 PROTECTION OF EXISTING WORK TO REMAIN

Abatement, storage, transportation, and disposal work shall be performed without damaging or contaminating adjacent work and areas. Where such work or areas are damaged or contaminated, the Contractor shall restore work and areas to the original condition.

8.3 COORDINATION WITH OTHER WORK

Abatement and disposal work shall be coordinated with existing work and/or concurrent work being performed in adjacent areas.

8.4 SAFETY AND HEALTH REGULATORY REQUIREMENTS

Work shall be performed in accordance with requirements of EM 385-1-1 and applicable regulations including, but not limited to 29 CFR Part 1910 and 29 CFR Part 1926, especially Section 62. Matters of interpretation of the standards shall be submitted to the appropriate agency for resolution before starting work. Where these requirements vary, the most stringent shall apply.

All personnel on the project shall be familiar with the hazards involved in the use of the equipment and materials on the project and in the proper techniques and procedures required to safely handle and apply the materials.

All mechanical equipment used on the project shall be equipped with safety devices necessary to prevent excessive pressure or temperature buildup at any step in its use. Ground fault circuit interrupters are required for all extension cord systems.

8.5 PRECONSTRUCTION SAFETY MEETINGS

The Contractor and subcontractors directly involved in the abatement shall attend a preconstruction safety meeting prior to starting any work involving LBP abatement. Items required to be submitted will be reviewed for completeness, and where specified, for acceptance.

8.6 ACCIDENT PREVENTION PLAN

8.6.1 PREPARATION AND IMPLEMENTATION

The Accident Preparation Plan (APP) shall be prepared in accordance with EM 385-1-1, Table 1.1. Where the topic in Table 1.1 of EM 385-1-1 is not applicable, the APP shall justify its omission or reduced level of detail, and establish that adequate consideration was given to the topic. The APP shall cover onsite work by the Contractor or subcontractors. The Competent Person shall be responsible for development, implementation, and quality control of the content and actions required in the APP. For each anticipated work task, the APP shall establish hazards and control measures. The APP shall be easily readable and understandable by the Contractor's work force.

8.6.2 ACCEPTANCE AND MODIFICATIONS

The APP shall be prepared, signed and dated by the Contractors Competent Person and submitted 3 days prior to the preconstruction safety conference. Deficiencies in the APP shall be discussed at the Pre-construction Safety Conference and the APP shall be revised to correct the deficiencies, and resubmitted for acceptance. Onsite work shall not begin until the APP has been accepted unless otherwise authorized by the Owner or his Representative. One copy of the APP shall be maintained in the Contractor' s job site file, and a second copy shall be posted where it will be accessible to personnel on the site. As work proceeds, the APP shall be adapted to new situations and conditions. Changes to the APP shall be made with concurrence of the Competent Person and Site Superintendent, and acceptance of the Owner or his Representative. Should an unforeseen hazard become evident during performance of the work, the Competent Person shall bring such hazard to the attention of the Superintendent and the Owner or his Representative, both verbally and in writing, for resolution as soon as possible. In the interim, the Contractor shall take necessary action to re-establish and maintain safe working condition; and to safeguard onsite personnel, visitors, the public, and the environment. Disregard for provisions of this specification, or the accepted APP shall be a cause for stopping of work until the matter is rectified.

8.6.3 ACTIVITY HAZARD ANALYSES

An Activity Hazard Analysis (AHA) shall be prepared prior to beginning each major phase of the work and submitted for review and acceptance. Format shall be in accordance with EM 385-1-1, Figure 1.1. A major phase of work is defined as an operation involving hazards not experienced in previous operations, or where a new work crew is to perform. The analysis shall define the activities and the sequence in which they are to be performed, specific hazards anticipated, and control measures to be implemented to eliminate or reduce each hazard to an acceptable level. Work shall not proceed on that phase until the AHA has been accepted and a preparatory meeting has been conducted by the Contractor to discuss content of the AHA with everyone engaged in the activity, including the onsite Owner's representative. The AHA shall be continuously reviewed and modified when appropriate to address changing conditions or operations. The accepted AHA shall be appended to and become part of the APP.

8.6.4 RESPIRATORY PROTECTION PROGRAM

A respiratory protection program shall be established as required by 29 CFR Part 1926 Section 103 and 62 and in accordance with 29 CFR Part 1910 Section 134.
An approved respirator shall be furnished to each employee and visitor required to enter a LBP work control area. A fit test shall be conducted in accordance with 29 CFR Part 1926 Section 62 Appendix D.

8.6.5 HAZARD COMMUNICATION PROGRAM

A Hazard Communication Program shall be implemented in accordance with 29 CFR Part 1926 Sec. 59.

8.6.6 SAFETY AND HEALTH OVERSIGHT

The Competent Person shall be the onsite person responsible for coordination, safety, security and execution of the work. The Competent Person shall be able to identify existing and predicable lead hazards and shall have the authority to take corrective measures to eliminate them. The Competent Person, shall be responsible for dust wipe and personal and environmental sampling.

8.6.7 PREPARATORY INSPECTION MEETINGS

The Contractor and any subcontractors directly involved in the abatement shall arrange and hold a preparatory inspection meeting immediately prior to beginning any LBP abatement. The APP, AHA, and the Contractor's LBP Management Plan, including containment; engineering controls, worker protection, training, and monitoring, will be reviewed for completeness.

8.6.8 TRAINED AND COMPETENT PERSONNEL

Work shall be performed by the Competent Person, qualified and trained in the abatement, enclosure, encapsulation, monitoring, testing, storage, treatment, hauling, and disposal of contaminated LBP debris material, and in subsequent cleanup of the affected environment. Workers shall comply with the appropriate Federal, state, and territorial regulations which mandate training requirements and work practices and shall be capable of performing the work under this contract.

8.6.9 POSTED WARNINGS AND NOTICES

The following regulations, warnings, and notices shall be posted at the work site in accordance with 29 CFR Part 1926 Section 62.

8.6.9.1 REGULATIONS

Two copies of applicable Federal, state, and local regulations and NIOSH OSHA Booklet 3142 shall be maintained. One copy shall be posted at the work site and one copy shall be on file in the project office.

8.6.9.2 WARNING SIGNS AND LABELS

Warning signs shall be provided at building entrances and approaches to LBP control areas containing airborne LBP debris. Signs shall be located at a distance from the LBP control areas that will allow personnel to read the sign and take the necessary protective actions required before entering the LBP control area.

8.6.9.2.1 Warning Signs

Warning signs shall be in English and when necessary in Spanish and be of sufficient size to be clearly legible and display the following:

WARNING
LEAD WORK AREA
POISON
NO SMOKING OR EATING
AUTHORIZED PERSONNEL ONLY
RESPIRATORS AND PROTECTIVE CLOTHING ARE REQUIRED IN THIS AREA

8.6.9.2.2 Warning Labels

Warning labels shall be in English and when necessary in Spanish, and be of sufficient size to be clearly legible and display the following:

CAUTION
CLOTHING CONTAMINATED WITH LEAD
DO NOT REMOVE DUST BY BLOWING OR SHAKING
DISPOSE OF LEAD CONTAMINATED WASH WATER IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE OR LOCAL REGULATIONS.

8.6.9.3 WORKER INFORMATION

Right-to-know notices shall be placed in clearly visible areas of the work site in compliance with Federal, state, territorial and local regulations.

8.6.9.4 AIR MONITORING RESULTS

Daily air monitoring results shall be prepared so as to be easily understood by the workers, and shall be placed in a clearly visible area of the work site.

8.6.9.5 EMERGENCY TELEPHONE NUMBERS

A list of telephone numbers shall be posted at the site. The list shall include numbers of the local hospital, emergency squad, police and fire departments, Building Owner and Contractor representatives who can be reached 24 hours per day, and professional consultants directly involved in the project.

9 EQUIPMENT AND MATERIALS

Sufficient quantities of all health and safety materials required by 29 CFR part 1926 Section 62, and other materials and equipment needed to complete the project, shall be available and kept on the site.

9.1 RESPIRATORS

Air-purifying respirators shall be approved by the National Institute for Occupational Safety and Health (NIOSH) and the Mine Safety and Health Administration (MSHA) for use with dust, fumes, and mists having permissible exposure limits less than 0.05 milligrams per cubic meter (i.e., have high-efficiency particulate air (HEPA) filters) and for other hazardous airborne contaminants that may be encountered, as determined by the Competent Person. Respirators shall comply with the requirements of 29 CFR Part 1926 Section 62 and be used in accordance with 29 CFR Part 1926 Section 103 and 29 CFR part 1910 Section 134.

9.2 CARTRIDGES

A sufficient supply of respirator cartridges shall be maintained at the work site to provide new cartridges to employees, authorized visitors, and Owner's personnel throughout the duration of the project. Cartridges shall be replaced according to the manufacturer' s recommendations, when breathing becomes difficult, or if the cartridge becomes wet.

9.3 PROTECTIVE CLOTHING

The Contractor shall furnish, at no cost to personnel, equipment/clothing for protection from airborne and waterborne LBP debris. An adequate supply of these items shall be available for workers, authorized visitors, and Owner's personnel use. Workers and visitors shall not take protective clothing and equipment off the work site at any time. Protective clothing includes:

a. **Coveralls** (Whole Body Protective Coverings): Full-body coveralls and head covers shall be worn by workers in the work area. Sleeves shall be secured at the wrist and pant legs at the ankle with tape. Permeable clothing shall be provided in heat-stress conditions. Where non-disposable coveralls are provided, these coveralls shall be cleaned after each wearing. Cleaning of coveralls and other non-disposable clothing shall be in accordance with the provisions for cleaning in 29 CFR Part 1926 Section 62.

b. **Boots**: Work boots with nonskid soles or impermeable work boot covers shall be worn by workers. Where required by OSHA, safety boots (steel toe or steel toe and shank) shall be worn. Paint the uppers of boots red with waterproof enamel. Do not allow boots to be removed from the work area for any reason after being contaminated with LBP debris. Dispose of boots as LBP contaminated waste at the end of the work.

c. **Gloves**: Inner gloves, appropriate for items and hazards enchanted, and disposable outer work gloves shall be provided to each worker and shall be worn while the worker is in the work area. Glove material shall be appropriate for the specific chemical exposure. Gloves shall not be removed from the work area, and shall be disposed of as LBP Contaminated waste at the end of the work.

d. **Hard Hats**: Head protection (hard hats) shall be provided as required by OSHA and EM 385-1-1 for workers and authorized visitors. Protective plastic Strap suspension hats shall be used. Hard hats shall be worn at all times that work is in progress. Hats shall remain in the work area until the project is completed. Hats shall be thoroughly cleaned, decontaminated, and bagged before being removed from the work area at the end of the project.

e. **Eye Protection**: Fog-proof goggles for personnel engaged in LBP abatement operations shall be worn when the use of a full face piece respirator is not required.

f. **Work Clothing**: Cloth work clothes shall be provided for wearing under the disposable protective coverall and foot coverings.

9.4 NEGATIVE AIR PRESSURE SYSTEM

When a LBP Control area requires the use of an airtight Containment barrier, a negative air pressure system shall be used, and pressure differential recordings taken. LBP shall not be removed from the LBP control area until the proper engineer controls and HEPA filtration systems are in place.

9.4.1 HEPA Filter Requirements

The negative air pressure system shall be equipped with approved HEPA filters per UL 586. Negative air pressure equipment shall be equipped with new HEPA filters and shall be sufficient to maintain a minimum pressure differential of minus 5 Pa (0.02 inch) of water column relative to adjacent, unsealed areas. Negative air pressure system minimum requirements are listed below.

a. The unit shall be capable of delivering its rated volume of air with a clean first stage filter, an intermediate filter and a primary HEPA filter in place.

b. The HEPA filter shall be certified as being capable of removing particles as small as 0.3 micrometers at a minimum efficiency of 99.997 percent.

c. The unit shall be capable of continuing to deliver no less than 70 percent of rated capacity when the HEPA filter is 70 percent full or measures 620 Pa (2.5 inches of water) static pressure differential on a magnehelic gage.

d. The unit shall be equipped with a manometer-type negative pressure differential monitor with minor scale division of 0.02 inch of water and accuracy within plus or minus 1.0 percent. The manometer shall be calibrated daily as recommended by the manufacturer. Manually record manometer readings of the pressure differential between the LBP control area and adjacent unsealed areas at the beginning of each workday and every 2 working hours thereafter.

e. The unit shall be equipped with a means for the operator to easily interpret the readings in terms of the volumetric flow rate of air per minute moving through the machine at any given moment.

f. The unit shall be equipped with an electronic mechanism that automatically shuts the machine off in the event of a filter breach or absence of a filter.

g. The unit shall be equipped with an audible horn that sounds an alarm when the machine has shut itself off.

h. The unit shall be equipped with an automatic safety mechanism that prevents a worker from improperly insetting the main HEPA filter.

i. The unit shall be ducted through the containment barrier wall to the outside of the building or work area. The unit shall never be exhausted into the work area.

If windows are being abated, a negative pressure reading of 5 Pa (0.02 inches) will be impossible to achieve. In this case, ensure that there are enough negative air machines to draw air through the windows into the abatement area. This will ensure that the outside area will not become contaminated. Specify a smoke test to ensure that proper air flow direction is achieved.

9.4.2 Number of Units Required

The air within the containment barrier shall be changed at least once every 15 minutes by a continuously operating negative air pressure system, until the LBP control area barrier is removed. Filters shall be replaced as necessary to maintain the efficiency of the system. A back-up unit shall be maintained onsite.

9.4.3 Auxiliary Generator

An auxiliary generator shall be provided with a capacity adequate to power a minimum of 50 percent of the negative air machines at any time during the work. When power fails, the generator controls shall automatically start the generator and switch the negative air pressure system machines to generator power.
The generator shall not present a carbon monoxide hazard to workers.

9.4.4 Local HVAC Systems

The building heating, ventilating, and air conditioning (HVAC) system shall not be used as the negative air pressure system for the LBP control area.

9.4.5 Discontinuing Negative Air Pressure System

The negative air pressure system shall not be shut down during LBP abatement work unless authorized by the Owner or his Representative. At the completion of the LBP abatement and disposal project, units shall be run until full cleanup has been completed and wipe clearance samples been collected, analyzed and have passed final clearance testing requirements. Dismantling of the negative air pressure systems shall conform to the written decontamination procedures. Prefilters shall be removed and properly disposed of and the intake to the machines shall be sealed with polyethylene to prevent environmental contamination.

9.5 EXPENDABLE SUPPLIES

Materials described in the following sections shall be provided by the Contractor.

9.5.1 Polyethylene Sheet and Bags - General

Polyethylene sheet and bags shall be a minimum of 0.15 mm (6 mils) thick. Bags shall have pre-printed labels, and 125 mm (5-inch) (minimum) long plastic ties, pointed and looped to secure the filled bags.
Polyethylene sheets shall be in roll sizes to minimize seams.

9.5.2 Polyethylene Sheet - Flame Resistant

Where a potential for fire exists, flame-resistant polyethylene sheets shall be provided. Polyethylene film shall be frosted or black and shall conform to the requirements of NFPA 701.

9.5.3 Polyethylene Sheet - Reinforced

Reinforced polyethylene sheets shall be provided where high skin strength is required such as where it constitutes the only barrier between the LBP control area and the outdoor environment. The sheet stock shall consist of translucent, nylon-reinforced or woven-polyethylene thread laminated between two layers of polyethylene film. Film shall meet flame resistant standards of NFPA 701.

9.5.4 Tape and Adhesive Spray

Tape and adhesive spray shall be capable of sealing joints between polyethylene sheets and for attachment of polyethylene sheets to adjacent surfaces. After dry application, tape or adhesive shall retain adhesion when expose to wet conditions, including amended water. Tape shall be a minimum of 50 mm (2 inches) wide, industrial strength.

9.5.5 Containers

Impermeable containers shall be used to receive and retain lead contaminated materials until disposal.
Containers shall be labeled in accordance with EPA, DOT and OSHA standards.

9.5.6 Chemicals

Chemicals, including caustics and paint strippers, shall be properly labeled and stored in leak-tight containers.

9.6 VACUUM SYSTEMS

HEPA filtered vacuum systems shall be used during abatement operations which generate dust. The systems shall be suitably sized for the project and filters shall be capable of removing particles as small as 0.3 micrometers at a minimum efficiency of 99.997 percent.

9.7 HEAT BLOWER GUNS

Heat blower guns shall be flameless, electrical, paint-softener type with controls to limit the temperature to 590 degrees C (1,100 degrees F). Heat blowers shall be DI (non-grounded) 120 Watt and shall be equipped with cone, fan, glass protector and spoon reflector nozzles.

9.8 CHEMICAL PAINTSTRIPPERS

Chemical paint strippers shall contain no methylene chloride and shall be formulated to prevent stain, discoloration, or raising of the substrate materials.

9.9 CHEMICAL PAINT STRIPPER NEUTRALIZER

Neutralizers for paint strippers shall be used on exteriors only and shall be compatible with the substrate and suitable for use with the chemical stripper that has been applied to the surface.

10 STORAGE OF MATERIALS

Materials shall be stored in a place and manner which protects them from damage and contamination. During periods of cold weather, plastic materials shall be protected from the cold. No flammable or hazardous materials shall be stored inside any building. Regularly inspect materials to identify damaged or deteriorating items. Damaged or deteriorated items shall not be used and shall be removed from the site as soon as they are discovered. Any materials which becomes contaminated with LBP waste shall be disposed of consistent with the requirements of 40 CFR Part 148 and these specifications. Stored materials shall not present a hazard or an inconvenience to workers, visitors, and/or other occupants and employees of the building.

11 EXECUTION

11.1 PILOT ABATEMENT PROJECT

Prior to beginning of full-scale abatement, a pilot abatement project shall demonstrate the specified abatement procedures. The pilot abatement project shall involve complete abatement of all defective LBP surfaces, per all sections of this specification and all applicable regulations, on designated structures. If reasonable justification can be provided, the Contractor can propose modifications to the Pilot Abatement Project in the LBP Management Plan. Preabatement lead dust samples shall be collected from each type of surface in the pilot building as specified in the Section *Wipe Sampling*, and the Section *Preabatement Lead-Dust Wipe Samples*. The Owner or his Representative shall evaluate the following during the pilot abatement project:

a. Dust lead wipe samples shall be collected and analyzed during abatement and for final clearance as specified in the Section *Wipe Sampling*. If results of analysis indicate that lead levels are above clearance levels, the Contractor shall evaluate his/her abatement cleanup procedures. If clearance levels are low and continue to be low, less restrictive engineering controls may be proposed by the Contractor.

b. If personal air sample analyses indicate that action levels or permissible exposure limits specified in 29 CFR Part 1926 Section 62 have not been exceeded, then respirator protection may become less restrictive. Half-face respirators shall be the minimum respiratory protection employed.

c. During cleanup, a final dust wipe clearance shall be performed after a single cleanup iteration. If the samples are below acceptable levels the Contractor may request approval for one cleanup pass instead of two cleanup passes.

d. Adequate samples of waste generated (water, solid components, caustic paste, filters, paint chips, etc.) shall be collected for Toxicity Characteristic Leaching Procedure (**TCLP**) testing. The TCLP test shall be performed by an accredited laboratory.

e. Waste generated throughout the abatement project shall be properly containerized, according to applicable regulations, and disposed of as per the results of the TCLP analysis.

11.2 WORK PROCEDURES

LBP abatement and related work shall be performed in accordance with the accepted Contractor's LBP Management Plan as modified and approved, following the pilot abatement project. Procedures and equipment required to limit occupational and environmental exposures to lead during LBP removal shall be in accordance with 29 CFR Part 1926 Section 62, and as specified herein. Paint chips and associated waste shall be disposed of in compliance with Federal, State, and local regulations.

11.2.1 PERSONNEL PROTECTION PROCEDURES

Personnel shall wear and use protective clothing and equipment as specified. Eating, smoking, drinking, chewing tobacco and chewing gum, and applying makeup shall not be permitted in the LBP control area.
Personnel of trades not engaged in the abatement and disposal of LBP shall not be exposed at any time to airborne concentrations of lead equal to or in excess of 30 micrograms per cubic meter of air. Electrical service shall be disconnected when wet removal is performed and temporary electrical service protected by a ground fault circuit interrupter shall be provided.

11.2.2 SAFETY AND HEALTH PROCEDURES

The Competent Person shall be present on the work site throughout the abatement project to supervise, monitor, and document the project's health and safety provisions. A daily log shall be maintained showing the results of sampling tests throughout the project area. LBP abatement work being conducted within a LBP Control area where an airtight barrier is required shall be stopped if dust wipe concentrations levels collected outside the containment area during abatement, equal or exceed the preabatement level or 200 micrograms per square foot, whichever is greater.

11.2.3 SAFETY AND HEALTH RESPONSIBILITIES

The Competent Person shall:

a. Verify that training meets applicable requirements.

b. Review and approve LBP Management Plan for conformance to the applicable referenced standards.

c. Inspect LBP removal work for conformance with the accepted LBP Management Plan.

d. Ensure that worker exposure air monitoring activities are in accordance with 29 CFR Part 1926 Section 62.

e. Ensure work is performed in strict accordance with the specifications.

f. Ensure hazardous exposure to personnel and to the environment are adequately controlled.

g. The Competent Person, shall be responsible for directing personal and environmental air monitoring and lead dust wipe sampling.

11.2.4 MEDICAL SURVEILLANCE PROCEDURES

Medical surveillance shall be implemented in accordance with the approved Contractor's LBP Management Plan, and shall comply with the requirements of 29 CFR Part 1926 Section 62, including the provisions for biological monitoring, medical removal protection and a physician's written opinion, signed by the physician performing the employee examination. The Contractor shall provide to the Owner a copy of the written opinion for Contractor's employees 2 days prior to each employee's commencement of work.

11.2.5 ENGINEERING CONTROLS AND CONTAINMENT STRUCTURES

The degree of isolation of the work area should be appropriate for the scale of abatement. For example, the work area generally does not need to be sealed off if the area of surface disruption is limited, debris is easily collected with a single sheet of plastic sheeting, and abatement on the work area is completed in one day. Full containment enclosures with negative air systems should only be used in situations where extreme environmental control is warranted. Containment's, by their nature, increase the exposure hazards to the workers who work in them. Inhalation and ingestion are the primary routes of exposure to

workers. Primary emphasis should be placed on controlling these routes of exposure through good personal hygiene, good housekeeping practices, and sound engineering controls.

11.2.5.1 LBP Control Area

The LBP control area is where LBP abatement work occurs and as such shall be considered contaminated, and shall be isolated to prevent LBP containing dust or debris from passing into adjacent building or open areas. The control area shall be decontaminated at the completion of the LBP abatement and disposal work.

11.2.5.2 Boundary Requirements

Physical boundaries shall be provided around exterior LBP control areas by roping off the area indicated in the LBP Management Plan. Interior projects shall be isolated by curtains, portable partitions, or other enclosures to ensure that concentrations of lead dust outside the LBP control area will not equal or exceed the preabatement level or 200 micrograms per square foot, whichever is greater.

11.2.5.3 Control Barriers

The LBP control area shall be separated from other portions of the building and the outside with control barriers. The polyethylene sheeting will have all openings masked and sealed and shall be erected according to the Contractor's LBP Management Plan. Polyethylene sheeting shall be mechanically supported, independent of duct tape or spray adhesive.

11.2.5.4 Preabatement Lead-Dust Wipe Samples

Preabatement lead-dust wipe sample shall be taken outside the LBP controlled area, in accordance with HUD ACCN-5646. Sample shall be taken within 3 meters (10 feet) of the abatement structure at 20 percent of the area planned for abatement.

11.2.5.5Masking and Sealing

a. ***Interior LBP control area requirements***: Openings shall be sealed where the release of airborne LBP dust is expected. A control area shall be established with the use of curtains, portable partitions, or other systems in order to prevent the escape of dust from the contaminated control area. The control area shall be provided with protective covering of two layers of polyethylene sheeting over floors. Penetrations of the floor, walls, and ceiling shall be sealed with polyethylene sheeting and duct tape. Polyethylene sheeting shall be firmly attached to the structure. Joints shall be sealed with spray adhesive and duct tape. Openings shall be provided for the supply and exhaust of air for the negative air pressure system. Personal monitoring during the work shift shall be in accordance with 29 CFR Part 1926 Section 62.

b. ***Exterior LBP control area requirements***: Where the construction of a contained LBP control area is impractical, a roped-off perimeter shall be installed 6 meters (20 feet) from, and around, the area where the LBP handling procedure are performed and other requirements for LBP control areas shall be maintained. Personal monitoring of airborne concentrations shall be conducted in adjacent areas, during the work shift, in accordance with 29 CFR Part 1926 Section 62. Where wipe sampling is not practical, air monitoring outside of the roped-off perimeter shall be conducted as specified. Airborne concentrations shall not exceed specified levels.

11.2.5.6 Personnel Decontamination Unit Procedure

Decontamination units shall be constructed when required for the abatement procedure. Materials fabricated or delivered to the site before the shop drawings have been returned to the Contractor will be subject to rejection by the Owner or his Representative. Specifications and drawings of portable prefab units, such as a trailer unit, if utilized, must be submitted for review and approval before start of construction. Submittal shall include, but not be limited to, a floor plan layout showing di-

mensions, materials, size, thicknesses, plumbing, and electrical outlets. Access between contaminated and uncontaminated rooms or areas shall be through an airlock. Access between any two rooms or room and trailer within the decontamination unit shall be through a plastic sheeting curtained doorway. A separate equipment decontamination unit shall be provided. Each work area shall have an emergency exit. The personnel decontamination unit's clean room shall be the only means of entrance and exit, except for emergencies, from the LBP control area. Materials shall exit the LBP control area through the equipment decontamination area.

11.2.5.7 Clean Room Procedures

The clean room shall have only one exit to non-containment areas of the building or site. An airtight seal shall be constructed of polyethylene between the clean room and the rest of the building. Surfaces of the clean room shall be protected with sheet polyethylene. A temporary unit with a separate equipment decontamination locker room and a clean locker room shall be provided for personnel who are required to wear whole body protective clothing. One locker shall be provided in each locker room for each LBP abatement worker, and each Contractor's representative. Lead-free personal clothing and shoes shall be kept in the clean locker. Hand wash station/showers shall be located between the equipment decontamination locker room and the clean locker room, and employees shall wash or shower before changing into personal clothes. An adequate supply of clean disposable towels shall be provided. LBP contaminated work clothing shall be cleaned. Clean rooms shall be physically attached to the LBP control area for areas inside the building but may be directly adjacent to the LBP control area outside of the building. Joint use of this space for other functions, such as offices, equipment storage, etc., is prohibited.

11.2.5.8 Hand Wash Station/Shower Room Procedures

An operational shower and hand washing station shall be provided between the work area and the clean changing room. Workers shall wash and/or shower before entering the clean changing room. The shower room shall be separated from other rooms by air tight walls fabricated from polyethylene sheeting. Water shall be hot and cold or warm. Shower heads and controls, soap dish, continuing supply of soap, and clean towels shall be provided. The shower shall be maintained in a sanitary condition. Waste water shall be pumped to drain and through waste water filters that meet state and/or local requirements. These filters shall be located inside the shower unit and filters shall be changed regularly. Used filters shall be discarded as LBP contaminate waste.

11.2.5.9 Equipment Decontamination Unit Procedures

The Equipment Decontamination Unit shall be used for removal of equipment and materials from the LBP control area, and shall include a wash room, holding room, and an enclosed walkway. The unit shall be constructed from wood framing material and polyethylene sheeting. Workers shall not enter or exit the LBP control area through the Equipment Decontamination Unit. A washdown station, consisting of an enclosed shower unit, shall be located in the work area outside the Wash Room. The washdown station shall be used to clean equipment, bags and containers. Bagged or containerized LBP wastes shall be passed from the work area and cleaned in the Wash Room. The Wash Room shall be separated from the work area by a polyethylene sheeting flap. Wastewater shall be filtered and filters shall be changed as required for the shower unit and the Wash Room. Filters shall be disposed of as LBP contaminated waste. The Holding Room shall be used as a drop location for bagged LBP passed from the Wash Room. This room shall be constructed so that bagged materials cannot be passed from the Wash Room through the Holding Room to the enclosed walkway. The walkway shall be separated from adjacent rooms by double flaps of 1.6 mm (1/16-inch) thick single ply rubber roofing materials of EPDM or Neoprene. The enclosed walkway shall isolate the Holding Room from the building exterior and shall be constructed of wood framing and polyethylene sheeting. The walkway shall provide access to the Holding Room from the building exterior. The enclosed walkway shall be separated from the exterior by a single flap of polyethylene sheeting.

11.2.5.10 Maintenance of Decontamination Units

Barriers and polyethylene sheeting shall be effectively sealed and taped. Containment barriers shall be visually inspected at the beginning of each work period. Damaged barriers and defects shall be immediately repaired upon discovery. Smoke methods shall be used to test effectiveness of barriers when directed by the Owner or his Representative.

11.2.5.11 LBP Control Area Exiting Procedures

Personnel exiting a LBP control area shall perform the following procedures and shall not leave the work place wearing any clothing or equipment worn during the work day.

a. Vacuum all protective clothing before removing.

b. Remove protective clothing in the decontamination room, and place this clothing in an approved impermeable disposal bag.

c. Wash or shower.

d. Change to clean clothes prior to leaving the physical boundary designated around the lead-contaminated work site.

11.2.6 FURNISHINGS

The Owner will remove furniture and equipment from the work area before LBP removal work begins.

11.2.7 BUILDING VENTILATING SYSTEMS

Any building ventilating system or any other system bringing air into or out of the LBP control work area shall be shut down and isolated by lockable switch; disconnecting wires; removing circuit breakers; isolate by airtight seals; or other positive means that will prevent spread of contamination through the system and accidental premature restarting of the equipment. Airtight seals shall consist of rigid covers for supply and exhaust grills and 1 or 2 layers of polyethylene. Individual seals shall be applied to ventilation openings (supply and exhaust), lighting fixtures, clocks, widows, doorways, elevator doors, stairs, ramps, speakers, and other openings into the work area. Seals shall be maintained until project decontamination is complete. After decontamination work has been completed and final air sample testing proves that the area is decontaminated, seals shall be removed and the ventilating systems may be operated again.

11.2.8 TEMPORARY UTILITIES

Temporary equipment to provide adequate power, light, heat, and water shall be installed to accomplish the abatement operations properly and safely. The Contractor shall maintain the security and maintenance of the utility system in the LBP control areas. In the event of a failure of any utility system, the Owner will not be responsible for any loss of time or other expense incurred by the Contractor. In addition, the Contractor shall provide:

a. Backflow protection on all water connections. Fittings installed by the Contractor shall be removed by the Contractor after completion of work, with no damage or alteration to existing water piping and equipment.

b. A hot water heater, if hot water is not supplied through the building's existing water supply to the decontamination showers.

c. Electrical service to work areas. Electrical service shall comply with NEMA, NECA, and UL standards. Warning signs shall be posted at power outlets which are other than 110-120 volt power. Only grounded extension cords shall be used. Incandescent lamps and light fixtures shall be of adequate wattage to provide good illumination in LBP control areas.

d. Temporary heating units, when needed, that have been tested and labeled by UL, FM, or another recognized trade association related to the fuel being consumed. Forced air or fan type units shall not be utilize inside a work area. Units shall have tip-over protection.

e. Sufficient quantity of single-occupant, self-contained chemical toilets, properly vented and fully enclosed, if permanent toilets are not available.

11.3 LBP ABATEMENT METHODS

Any or all of the following techniques may be used to eliminate defective lead-based paint surfaces. Techniques selected shall minimize adverse effects to the historic character of the buildings within the National Historic Landmark, in accordance with 36 CFR Part 60, 36 CFR Part 800, and the Programmatic Agreement.

11.3.1 ENCAPSULATION WITH SURFACE COATINGS

Peeling and deteriorating surfaces shall be wet scraped prior to application of the approved encapsulant. Debris shall be handled in accordance with the Hazardous Waste Management Plan. Surfaces shall be prepared according to the manufacturer's specifications. Surface coatings shall not be applied to friction surfaces such as window tracks or door jams.

11.3.2 ENCAPSULATION WITH FLEXIBLE WALL COVERING SYSTEMS

Peeling and deteriorated surfaces shall be wet scraped prior to application of the approved flexible wall covering material. Debris shall be handled in accordance with the Hazardous Waste Management Plan. Surfaces shall be prepared according to the manufacturer's specifications.

11.3.3 COMPONENT REPLACEMENT

All components specified for replacement in the LBP Management Plan shall be replaced with new components that match in composition, design, color, texture, and other visual qualities (Secretary of the Interior's Standards for the Treatment of Historic Properties) and are of the same or better quality. Components shall include but not be limited to doors, window, moldings, casements, mantles, trims, baseboards, and associated hardware and fasteners. All debris shall be handled in accordance with the Hazardous Waste Management Plan. Replacement components shall be installed according to local building codes.

11.3.4 CHEMICAL STRIPPING

LBP shall be removed by using approved chemical strippers. Chemical strippers containing methylene chloride are prohibited. Stripping shall be done according to manufacturer's recommendations. Substrates shall be thoroughly washed and neutralized before applying a primer or sealing coat. Waste generated by the stripping process shall be handled in accordance with the Hazardous Waste Management Plan. Adjacent walls and floors shall be protected to prevent contamination.

11.3.5 HAND-SCRAPING WITH A HEAT GUN

LBP can be removed by hand-scraping with a heat gun. Paint residue shall be handled in accordance with the Hazardous Waste Management Plan. Heat guns shall be operated below 590 degrees C (1,100 degrees F) to prevent possible release of toxic fumes or starting a fire.

11.3.6 VACUUMBLASTING

LBP shall be removed by vacuum blasting techniques with the device fitted to HEPA vacuum systems. Work shall be performed in a LBP control area using negative pressure full containment with HEPA filtered exhaust. Paint residue shall be handled in accordance with the Hazardous Waste Management Plan.

11.3.7 NEEDLE GUN

LBP can be removed by needle gun with the device fitted to HEPA vacuum systems. Work shall be performed in a LBP control area using negative pressure full containment with HEPA filtered exhaust. Paint residue shall be handled in accordance with the Hazardous Waste Management Plan.

11.3.8 ABRASIVE BLASTING WITH CHEMICAL STABILIZER

LBP can be removed by abrasive blasting with blasting media other than sand (coal slag media) and a chemical stabilizer (calcium silicate "Blastox") with the device fitted to HEPA vacuum systems. Work shall be performed in a LBP control area using negative pressure full containment with HEPA filtered exhaust. Sanding of blasted surfaces shall be accomplished within containment. Paint residue shall be handled in accordance with the Hazardous Waste Management Plan.

12 MONITORING

During the entire LBP removal and disposal operations, a Competent Person, Air Monitoring Specialist shall be onsite directing the monitoring/sampling and inspecting the work to ensure that the health and safety requirements of this contract are satisfied.

12.1 PERSONAL AIR MONITORING

Airborne concentrations of lead shall be collected and analyzed in accordance with 29 CFR Part 1926 Section 62. Results shall be reported in micrograms per cubic meter of air. The Air Monitoring Specialist shall use personal air monitoring results to determine the effectiveness of engineering controls, the adequacy of PPE and to determine if proper work practices are being employed. The Owner or his Representative shall be notified if any personal air monitoring result equals or exceeds 30 micrograms per cubic meter of air. The Contractor shall take all necessary steps to reduce the concentration of lead in the air.

12.2 WIPE SAMPLING

Wipe sampling for lead dust concentrations shall be conducted during:

a. Preabatement to establish a baseline.

b. Abatement to monitor activities and ensure containment integrity.

c. Post abatement to determine if specified clearance criteria has been met.

12.2.1 Preabatement

Preabatement wipe samples shall be collected outside the LBP control area in accordance with the Section *Preabatement Lead-Dust Wipe Samples*. Samples outside the LBP control work area shall be collected at critical barriers, in the clean room of the decontamination unit and in traffic control areas such as personal and equipment entrances.

12.2.2 Abatement

The Air Monitoring Specialist shall collect wipe samples during all LBP abatement activities on a daily basis. The sample shall be collected outside the LBP control area in accordance with the Section *Preabatement Lead-Dust Wipe Sample*. Samples shall be collected outside the LBP control work area at critical barriers, in the clean room of the decontamination unit and in traffic control areas such as personal and equipment entrances.

12.2.3 Results

The Contractor shall have the results of the wipe sampling within 48 hours after the completion of the sampling. Results shall be reported in micrograms per square foot.

12.2.4 Excessive Levels

LBP abatement work being conducted within a LBP control area shall be stopped if measured dust wipe concentration levels collected outside the containment area, during abatement, equal or exceed the preabatement levels or 200 micrograms per square foot, whichever is greater. The Contractor shall immediately notify the Owner or his Representative. At the direction of the Owner or his Representative, the Contractor shall clean outside areas which equal or exceed the levels stated above, at no additional cost to the Owner. The cleaning shall be in accordance with the Section *Cleanup and Disposal*, prior to clearance. The Contractor shall collect and have analyzed additional wipe samples at no charge to the Owner to ensure the areas are clean. Cleaning and resampling shall continue until levels as stated above are achieved. The Contractor shall correct containment and/or work practices to mitigate the problem. Removal work shall resume when approval is given by the Owner or his Representative.

12.2.5 Post Abatement

Post abatement samples shall be collected in accordance with the Section *Final Clearance Testing*.

12.3 AREA AIR MONITORING

Area air sampling outside the work area should be done where wipe sampling is not practical, such as during abatement on the exterior of buildings. Airborne concentrations of lead shall be collected and analyzed in accordance with 29 CFR Part 1926 Section 62. Results shall be reported in micrograms per cubic meter of air.

12.3.1 Preabatement

Preabatement sample shall be collected in the following locations outside the work area;

- one upwind of the abatement and
- two downwind of the abatement activities.

12.3.2 Abatement

The Air Monitoring Specialist shall collect area samples on a daily basis. The sample shall be collected in the same location as the preabatement samples.

12.3.3 Results

The contractor shall have the results of the area air monitoring within 48 hours after completion of the sampling. Results shall be reported in micrograms per cubic meter of air.

12.3.4 Excessive Levels

Outdoor LBP abatement shall cease and the Owner or his Representative notified if measured airborne lead concentrations, collected during abatement, exceed the preabatement airborne lead concentrations levels. The Contractor may be required to clean and resample the effected area, at no additional cost to the Owner, if directed by the Owner or his Representative. The Contractor shall correct the work practices and/or engineering controls and shall resume abatement at the direction of the Owner or his Representative.

12.4 WASTE SAMPLING AND TESTING

Sampling and testing of all waste shall be in accordance with 40 CFR part 261.

12.5 SOIL SAMPLING

Sampling and testing of soils shall be in accordance with EPA SOP Publication No. 600/2-91-231 and other procedures.

12.5.1 Preabatement Soil Sampling

a. In order to establish baseline lead-in-soil conditions on the site prior to the initiation of exterior lead abatement, soil samples will be collected.

b. Eight to ten small portions of surface soil shall be scooped with a fresh 50 ml plastic centrifuge tube and composited. This will represent a single sample. If excessive paint chips are present in the soil they shall be included in he sample. The 8-10 sample shall be collected such that they represent the area where abatement occurred. One shall be taken at the drip line extending out a distance of ten feet (10'). Sampling shall be on bare soil.

c. If preabatement soil samples at any of the building locations exceed 1,000 ppm, the Contractor may be required to perform soil excavation and removal at additional cost as specified.

12.5.2 Post-abatement Soil Sampling

a. Post-abatement soil samples, will be collected at the same locations where pre-abatement soil samples were collected.

b. If preabatement soil samples were at or below 1,000 ppm, and the post-abatement soil samples exceed 1,000 ppm, the contractor will be required to perform soil excavation and removal at no additional cost to the Owner.

c. Abated soil shall be tested as specified in the paragraphs *CLEANUP* and *DISPOSAL*. Soil analysis that exceed TCLP limits shall be treated as LBP contaminated waste and disposed of accordingly.

12.6 SOIL ABATEMENT

Careful excavation of soil may begin with equipment such as an excavator or backhoe and continue with hand tools as directed by the Owner. Careful handling of abated soils shall be employed in order to minimize unnecessary dust and to avoid damaging the structure and reduce potential waste generation.

a. Excavation to a depth of two (2") inches will take place within the areas identified by the Owner.

b. Excavation will be performed with care to minimize the generation of dust and unnecessary waste, and to protect structures, utilities, sidewalks, pavements, and other facilities from damage that may be caused by equipment, contaminated soils, and other hazards created by operations.

c. Excavated soils will be placed in a predesignated area in six (6) mil polyethylene sheeting and covered with the same.

d. Appropriate worker protection practices shall be followed as specified in OSHA Regulations.

e. Proper protective measures will be taken to prevent human exposure to excavated soils. Protective measures shall include installation of construction fencing around excavated areas and the use of staked and/or weighted polyethylene sheeting to cover excavated area to prevent wind or precipitation damage.

12.7 CLEANUP AND DISPOSAL

12.7.1 Daily Cleanup

Surfaces in the LBP control area shall be maintained free of accumulations of paint chips and dust. Spread of dust and debris shall be restricted; waste shall not be distributed over the work area. Dry sweep or compressed air shall not be used for cleanup. At the end of each shift, the area shall be cleaned of visible lead paint contamination by vacuuming with a HEPA filtered vacuum cleaner and wet mopping the area. LBP abatement work shall cease during the cleanup.

12.7.2 Cleanup Prior to Clearance

Upon completion of the lead paint abatement and a satisfactory visual inspection by the Contacting Officer in a given work area, a preliminary clean-up shall be performed by the Contractor. This clean-up includes removal of any contaminated material, equipment or debris including poly sheeting from the work area, except for critical barriers. The polyethylene sheeting shall be sprayed or misted with water for dust control, abatement debris removed and then the sheeting removed by folding it in upon itself. Polyethylene sheeting used for critical barriers shall remain in place until final clearance criteria are met. The following methodology shall be utilized during the cleanup prior to clearance.

a. Lead-contaminated debris shall be containerized in accordance with the Section *Contaminated Waste.* Waste bags shall not be overloaded, shall be securely sealed and stored in the designated area until disposal.

b. Non-contaminated debris shall be containerized; removed from the work area and stored in the designated area until disposal in accordance with the Section *Non Contaminated Waste.*

c. Removal of surface poly sheeting shall begin from upper levels such as cabinets and shelves. Removal of floor polyethylene sheeting shall begin at the comers and folds in the middle to contain the dust. Polyethylene shall be disposed of as specified for debris.

d. *Cleaning*. Once the polyethylene sheeting, except critical barriers is removed from the work area, cleaning shall begin. It shall be done in the following sequence:

HEPA Vacuum;
Tri-Sodium Phosphate (TSP) wash(or equivalent cleaner); and

e. *HEPA Vacuum*. Vacuum all surfaces beginning with ceilings and proceed down the walls, including window, doors, door trim and ending with floors. Begin vacuuming at the furthest comer from the entrance to the work area.

f. *Wet Wash*. Wash or mop the surfaces vacuumed in the same sequence. Contractor shall utilize a TSP detergent solution or other equally effective cleaning agent and allow surface to dry.

g. *Cleaning Equipment*. The Contractor shall prepare and use detergents containing five to ten percent TSP or other equally effective cleaning agent which shall be used in accordance with the manufacturers instructions. The waste water from cleaning shall be contained and disposed of according to applicable Federal, state, territorial and local regulations and guidelines. The waste water shall not be disposed of in storm sewers or sanitary sewers without specific and written approval.

12.8 VISUAL INSPECTION

Upon completion of be final cleaning, the Contractor shall notify be Owner or his Representative and request a final visual inspection with the Owner or his Representative's representative with the criteria in be final cleaning/visual inspection example format sheet located at the end of this section. If the area does not pass the visual inspection, the Contractor shall reclean the area as required by the Section, *Cleanup and Disposal*, at no additional expense to the Owner. Final clearance testing shall not proceed until the Owner or his Representative has accepted the final cleaning by the Contractor.

12.9 FINAL CLEARANCE TESTING

Final clearance surface dust sampling in accordance with HUD ACCN-5646 shall be conducted after a thorough cleanup has been completed in accordance with be following:

a. Onsite paint removal throughout be unit. Three samples shall be taken (one from a window sill, one from a window well, and one from the floor) in each area. An area is defined as a room, closet, pantry, hall, portion of a room, etc.

b. Onsite paint removal in limited areas. Three samples shall be taken (one from a window sill, one from a window well, and one from the floor) in each area abated and one sample outside the containment area (within ten feet in 20 percent of the abated units). Pre-abatement wipe samples shall be compared to determine if dust from the abatement process has contaminated non-abated areas. The Contractor shall cleanup these areas if contamination from the abatement process occurs.

c. Replacement and/or encapsulation only throughout the unit. One wipe sample shall be taken in each area divided equally between window wells, window sills, and floors.

d. Replacement and/or encapsulation only in limited areas. One wipe sample shall be taken in each abated area divided equally between window wells, window sills, and floors, and one wipe sample outside the containment area within ten feet in 20 percent of the abated units.

e. Exterior abatement. At least one wipe sample shall be taken on a horizontal surface in part of the living area such as a front porch.

Retests
Should laboratory results indicate that the wipe test clearance level is exceeded, the Contractor shall reclean the affected areas, at no additional cost to the Owner. The Contractor shall utilize specified cleaning methods. Retesting will then be performed to determine if specified clearance criteria are met. The Contractor shall pay for additional testing and shall provide, at no cost, a recleaning of the affected area until the clearance level is achieved.

12.10 CERTIFICATION

The Competent Person shall certify in writing that inside the LBP control area and the area external to the LBP control area met final clearance requirements.

12.11 REMOVAL OF CONTROL AREA

After approval of the final clearance certification, and when authorized by the Contacting Officer, the LBP control area, containment barriers, and control structures roped-off boundary and warning signs shall be removed.

12.12 DEMOBILIZATION

The Contractor shall, within five days after completion of this contract, remove from premises all vehicles, equipment, tools, supplies, material or other items. Any Contractor owned items remaining shall be subject to a storage charge, which will be deducted from the final invoice amount of this contract. If the Contractor does not remove said items from premises within 30 days after completion of this contract, the items will become the property of the property owner and the Owner can dispose of these items as he feels necessary.

12.13 DISPOSAL

12.13.1 Toxic Characteristic Leaching Procedure *TCLP* Results

The results of the Pilot Abatement project and/or TCLP analysis performed during abatement shall be used to determine disposal procedures.

12.13.2 Contaminated Waste

Lead-contaminated waste, scrap, processed water and debris shall be disposed of as follows:

a. Lead-contaminated waste, scrap, debris, bags, containers, equipment, and lead contaminated clothing, which may produce airborne concentrations of lead particles and shall be stored in US Department of Transportation (49 CFR Part 178) approved 200 liter (55 Gallon) drums. Each drum shall be labeled to identify the type of waste as defined in 49 CFR Part 172 and the date lead-contaminated waste were first put into the drum. The Uniform Hazardous Waste Manifest forms from Federal and state agencies shall be obtained and completed. Land disposal restriction notifications shall be as required by 4O CFR Part 268. The Owner or his Representative shall be notified at least 14 days prior to delivery to arrange for job site inspection of the drums and manifests. Lot deliveries of hazardous wastes shall be made as needed to ensure that drums do not remain on the work site longer than 90 calendar days from the date affixed to each drum. The Owner or his Representative will assign an area for interim storage of waste containing drums.

b. Lead-contaminated waste shall be handled, stored, transported, and disposed of in accordance with 4O CFR Part 26O, 40 CFR Part 261, 40 CFR Part 262, 40 CFR Part 263, 40 CFR Part 264, and 40 CFR Part 265. Land disposal restriction notification shall be as required by 40 CFR Part 268.

12.13.3 Non-contaminated waste

Non-contaminated waste, scrap, and debris shall be disposed of in an approved landfill. Waste shall be transported to a landfill in covered vehicles. Residential or commercial trash collection services shall not be used without approval of local authorities. If the Contractor subcontracts removal of the waste, the Contractor shall ensure that the company removing the waste material adequately covers all loads to ensure that no dust or debris is released. The subcontractor shall be informed by the Contractor of the presence of lead.

12.13.4 Disposal Documentation

Written evidence shall be provided that the hazardous waste treatment, storage, or disposal facility (TSD) is approved for lead disposal by the EPA and state or local regulatory agencies. One copy of the completed manifest, signed and dated by the initial transporter, shall be submitted in accordance with 40 CFR Part 262.

CERTIFICATION OF FINAL CLEANING AND VISUAL INSPECTION

In accordance with the clearing and decontamination procedures specified in the Contractor's lead hazard abatement plan and this contract, the Contractor hereby certifies that he/she has thoroughly visually inspected the decontaminated regulated work area (all surfaces, including pipes, beams, ledges, walls, ceiling, floor, decontamination unit, etc.) and has found no dust, debris, or lead containing material residue.

BY: _____

(Contractor's signature) Print name and title

_____

Contractor' s Competent Person, Print name and title

AUTHORIZING OFFICER ACCEPTANCE OR REJECTION

The Authorizing Officer hereby determines that the Contractor has performed final cleaning and visual inspection of the de-contaminated regulated work area (all surfaces including pipes, beams, ledges, walls, ceiling, floor, decontamination unit, etc.) and by quality assurance inspection, finds the Contractor's final cleaning to be:

Acceptable

Unacceptable, Contractor instructed to reclean the LBP control work area

BY: Authorizing Officer

_____

Signature Print name and title

EMSL Analytical, Inc.
200 Route 130 North, Cinnaminson, NJ 08077
Phone/Fax: (856) 303-2500 / (856) 786-5974
http://www.EMSL.com cinnaminsonleadlab@emsl.com

EMSL Order:	201811446
CustomerID:	ECI50A
CustomerPO:	
ProjectID:	

Attn: **Maxcess Armantrading**
Environmental Concepts, Inc. (ENCON)
1047 King Street - Suite 1
Christiansted, St. Croix, 00820

Phone:	(340) 771-0550
Fax:	(815) 550-1134
Received:	10/06/18 1:15 PM
Collected:	10/4/2018

Project: **Office of the Governor- Government House / Kongens Gade- Charlotte Amalie, St. Thomas- USVI00802**

Test Report: Lead in Paint Chips by Flame AAS (SW 846 3050B/7000B)*

Client Sample Description	*Lab ID*	*Collected*	*Analyzed*	*Weight*	*Lead Concentration*
1	*201811446-0001*	10/4/2018	10/8/2018	0.2590 g	7.1 % wt
	Site: Door Jamb Storage- 3rd Floor / White/Pink				
2	*201811446-0002*	10/4/2018	10/8/2018	0.2554 g	0.44 % wt
	Site: Kitchen Wall- 2nd Floor / Multicolor				
3	*201811446-0003*	10/4/2018	10/8/2018	0.2527 g	0.031 % wt
	Site: Wood Deck- 2nd Floor / Red				
4	*201811446-0004*	10/4/2018	10/8/2018	0.2516 g	0.012 % wt
	Site: Storage Wall- 1st Floor / Multicolor				
5	*201811446-0005*	10/4/2018	10/8/2018	0.2541 g	0.028 % wt
	Site: Protocol Wall- 1st Floor / Multicolor				
6	*201811446-0006*	10/4/2018	10/8/2018	0.2530 g	<0.0080 % wt
	Site: Entrance Pillar- 1st Floor / White				

Phillip Worby, Lead Laboratory Manager
or other approved signatory

*Analysis following Lead in Paint by EMSL SOP/Determination of Environmental Lead by FLAA. Reporting limit is 0.008 % wt based on the minimum sample weight per our SOP. Unless noted, results in this report are not blank corrected. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities. Samples received in good condition unless otherwise noted. "<" (less than) result signifies that the analyte was not detected at or above the reporting limit. Measurement of uncertainty is available upon request. The QC data associated with the sample results included in this report meet the recovery and precision requirements unless specifically indicated otherwise. Definitions of modifications are available upon request.

Samples analyzed by EMSL Analytical, Inc. Cinnaminson, NJ NELAP Certifications: NJ 03036, NY 10872, PA 68-00367, AIHA-LAP, LLC ELLAP 100194, A2LA 2845.01

Initial report from 10/08/2018 15:47:40

OrderID: 201811446

201811446

Environmental Concepts Inc.

1047 King Street – Suite 1, Christiansted, St. Croix, USVI 00820 - 340-771-0550 & 340-778-3221 - encon@mail.com

Chain of Custody / Analysis Request Form

Project Name: *Office of the Governor - Government House* **Page:** *1* **of 1**

Address: *Kongens Gade – Charlotte Amalie, St. Thomas – USVI 00802*

Date: *October 4 , 2018* **Name of inspector:** *Maxcess Armantrading*

O Lead by AAS

Nbr		Description Location		
1	1	Doorjamb Storage - 3rd floor	Paint chip	White/pink
2	2	Kitchen wall - 2nd floor	Paint chip	Multicolor
3	3	Wood Deck - 2nd floor	Paint chip	red
4	4	Storage Wall - 1st floor	Paint chip	Multicolor
5	5	Protocol Wall - 1st floor	Paint chip	Multicolor
6	6	Entrance Pillar - 1st floor	Paint chip	white

TAT: *24 hours* **Delivery Method:** *US Mail - Express*

Send Results to: Florida Office
Billing to Florida Office

Fax: 815-550-1134
EMail: encon@mail.com

6

EMSL Analytical
200 Route 130 North
CINNAMINSON, NJ08077

Maxcess Armantrading

Of Mail 10/6/16 13:15?

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